CA1
Z3
-41R101
3 1761 11971064 8

Government
Publications

Government
Publications

CA1
Z3
-41R10
Government
Publications

Digitized by the Internet Archive
in 2023 with funding from
University of Toronto

https://archive.org/details/31761119710648

Gov.Doc.
Can
Com
R

Canada. Reconstruction, Advisory Committee on.
[Studies and factual reports]

ADVISORY
COMMITTEE ON RECONSTRUCTION

SEQUENCE AND TIMING OF ECONOMIC EVENTS IN THE LAST WAR AND POSTWAR PERIOD, 1914-1923

2 vols. in 1.

1(a). Descriptive Report

by

Dr. Alice W. Turner

1(b) Analytical report
by Prof. B.H. Higgins.

Toronto, 1943

448966
1-7-46

This study was prepared for the use of the Advisory Committee on Reconstruction. The views expressed are those of the author and do not necessarily carry the approval of the Advisory Committee on Reconstruction or its Subcommittees.

An analytical report on the same subject by Professor B.H. Higgins of McGill University is also available.

CONTENTS

List of Tables in the Text.

CONTENTS

Page

List of Tables in the Text

INTRODUCTION

To provide a clear idea of precisely what happened in Canada's economy during the post-war period, it is essential to know when and where signs of recession or recovery first occurred. Since annual figures are obviously inadequate for precise timing and sequence of events, the writer undertook to secure and assemble all possible monthly statistics for the various economic factors which are pertinent.

To this end, over 200 statistical series were collected covering the period 1914-23 by months, subsequently converted to comparable scales and finally charted in standard form. The charts form a voluminous complement to this report, and are the basis for the empirical analysis in the succeeding pages.

In spite of the efforts made, it is necessary to recognize that there are many important gaps and uncertainties in the available monthly statistics for this important chapter in Canadian history, 1914-1923. For example, monthly data are unobtainable for electric power production, motor car sales, volume of railway and freight traffic, wage levels in any precise sense, employment for many activities, capital investment, and composite production figures for many industries. The most complete monthly data extant are in the fields of prices and finance. The dearth of some critical monthly statistics for Canada during 1914-23 must be accepted as a definite fact--unfortunate for the full purposes of this study, but nevertheless true.

Moreover, monthly statistics should be interpreted with caution, more particularly when they relate to individual industries. For example, seasonal factors greatly influence monthly fluctuations in production and employment for many trades and industries. Business activity normally reaches peak levels for automobile production in early spring, building of houses is normally greatest in August, and meat-packing operations are highest in November or December. Obviously it would be difficult to determine the exact timing and sequence of such highly seasonal industries relative to a general trend. However, their broad relation to the general picture can be individually discerned by comparing activity in each industry for the same month from year to year, thereby minimizing the seasonal influence. Again, monthly export and import figures could scarcely be expected to define clear turning-points in a country's business experience. It would be difficult to determine the precise time which elapsed between changed export and import demand and the date of shipment; also, shipments might follow a long-term contract and not coincide with alterations in export or import demand.

In order to lessen the seasonal aberrations inherent in monthly data, several of the statistical series charted were smoothed (by means of a 12-months moving average). Much industrial data shows such extreme dispersion from month to month that clearly defined turning-points are often not discoverable, even after smoothing.

The most complete and reliable monthly statistics of Canadian employment over this period appeared to be those obtained from the Census of Industry, but they have limitations. They cover manufacturing industries only and are not available prior to 1917, and are not strictly comparable after 1920. Furthermore, they do not discriminate between full-time and part-time employees. Consequently, it is possible that manufacturing operations could be curtailed or expanded appreciably through shorter or longer working shifts without a corresponding reduction being reflected in number of employees on the payrolls. Notwithstanding their deficiencies for an exact appraisal of the timing and extent of business changes, however, they furnish a fairly reliable guide to the general trend.

Aside from banking figures, prices and other data necessarily expressed in terms of money, statistics expressed in terms of physical quantities were obtained wherever possible. Clearly, physical quantity

figures/

figures provide the ideal measurment of increase or decrease in business activity and employment levels, since they are directly comparable. Dollar value changes on the other hand, may reflect partly variation in business levels and partly variations in price levels; there may be no satisfactorily accurate criterion to gauge the extent of the change attributable to each of these variations. Emphasis upon physical quantity statistics is particularly important for the 1914-23 period, when price control in its present form did not prevail.

While the foregoing comments concerning monthly statistics apply equally to the actual war years, timing and sequence were comparatively unimportant factors during the Great War when mounting war activity created general and pervasive prosperity throughout the country. Moreover, monthly data were so inadequate prior to 1918 that statistical analyses along the lines examined for 1918-23 were not feasible for the war years. In the post-war period, however, the timing and sequence of the marked business changes which were directly or indirectly the product of the Great War, are of real significance. So far as it has been possible, the record for Canada has been completed in the charts belonging to this study, so that comparision with contemporary events and policies can be made.

The substantial labour of charting the series was performed mainly by F.H. Leacy, of the Committee on Reconstruction staff, and C.E. Strike of the Bank of Canada, under the direction of Dr. L.C. Marsh, Research Adviser of the Committee. Mr. Leacy also prepared much subsidiary data relating to the economic structure of Canada during the last war period. Acknowledgement is gratefully tendered to the Dominion Bureau of Statistics for their cooperation in making available many series previously uncompiled; and particularly to the many industries and corporations who, often at much inconvenience at time of considerable war pressure, responded to the requests of the undersigned for special data without which a representative coverage of the subject would not have been possible.

A.W.T.

....

All observations made in this study should be construed solely as those of the writer, and in no way representative of any business or other affiliations.

I. THE IMPACT OF THE WAR.

At the outbreak of the Great War in 1914, a long period of prosperity and internal expansion in Canada had already terminated and the country's economy was in the throes of readjustment and depression. For almost two decades immense capital facilities had been built up, financed to a significant extent by external borrowing. Railways and roads had been constructed, land had been occupied, farm machinery and equipment had been provided for nearly 200,000 farms, new cities and towns had grown up in western Canada and large-scale immigration had been promoted. Foreign investors had risked their capital to create such tremendous development, in the belief that Canada's export capacity would be greatly enlarged. The time had arrived for these capital facilities to be utilized for productive purposes. Canada needed a surplus of merchandise exports over imports, which would be sufficient to meet external interest and dividend payments on borrowed capital. These changes from capital expansion to production of export staples implied a transfer of labour, with employment in construction replaced by employment in production. Pending the transition there were considerable dislocations in Canada.

The initial effect of the war was to intensify the dislocations. Montreal and Toronto Stock Exchanges closed for nearly three months and then reopened only for limited trading. Consumer purchasing was confined mainly to immediate needs and many factories ceased operations. Serious unemployment marked the winter of 1914-15, with enlistments easing the situation but slightly. By the spring of 1915, however, urgent war demands for foodstuffs and munitions contracts had facilitated the physical readjustments Canada was destined to make. Available capital facilities were rapidly utilized to meet export requirements, with the emphasis upon agriculture and munitions. Export markets which might otherwise have taken time and difficulty to secure were automatically and non-competitively provided by pressing Allied needs.

Thus Canada entered upon an era of war prosperity wherein productive resources were primarily employed to supply exports of wheat, flour, and other foodstuffs, explosives, shells and other munitions, and to build ships to transport them. Obviously the expanded and accelerated war production programme required money.

Commensurate with the war boom, Canada's estimated national income increased from around \$2,253,000,000 in 1914 to around \$3,714,000,000 in 1918--a gain of 65%. Primary agricultural net production contributed roughly one-third of the total estimated national income in both years, while manufacturing net production contributed about 17% in 1914 and 29% in 1918.

Over the war period, Canada's main exports more than doubled in volume, and increased more than four times in value. Hydro-electric development was extended to meet larger industrial needs and growing mining activity. Transportation and other distributive services were increasingly utilized to accommodate larger war exports and imports. Apart from construction, which was at a low ebb during hostilities, domestic trade thrived in response to rising money incomes throughout the country. Volume of money in the hands of the public expanded by approximately 70%, and over \$1,500,000,000 was raised through five War and Victory Loans floated between the autumn of 1915 and 1918. In brief, a high tempo of business activity prevailed throughout the war, relentlessly and perhaps unconsciously weaving significant changes in the Canadian economic structure. What these changes were will be clearer from reference to sectors of the economy considered separately.

Production/

a. Production and Trade

There are no available records from which to determine the exact proportion of Canadian production and employment in various economic activities during this period.

In 1915, when the war boom began, Canada's estimated population was about 7,900,000 (excluding 33,000 overseas). By 1918 Canada's estimated population had increased to about 8,200,000 (excluding 400,000 overseas), and the fully employed labour supply was perhaps around 500,000 greater. In all likelihood many employed in agricultural activities in 1915 had been drawn into munitions work, so that in 1918 agriculture probably employed a smaller proportion of total Canadian workers than in 1915. Women had entered munitions work, and had also replaced men to fill gaps created by overseas service, while many retired persons had also resumed work for the duration of the war.

Agriculture. From the outset of war, efforts were made to increase production of foodstuffs for export. Canadian wheat became particularly important for the Allies, since the closing of the Dardanelles had eliminated Russia as a source of supply. Area of some 33,000,000 acres sown to farm crops in 1914 had been extended to some 51,000,000 acres by 1918--a gain of 54%. Livestock raising and dairying were encouraged so that Canada could produce increased quantities of meat, butter, cheese, and other products for export. The 1915 record wheat crop of more than 393,000,000 bushels exceeded highest expectations, but, despite the more extensive areas sown, unfavourable weather conditions caused reduced crops in the next three years. The wheat crops in 1916, 1917 and 1918 totalled 263,000,000 bushels, 234,000,000 bushels, and 189,000,000 bushels respectively.

Significant statistics for Canada's export trade in agricultural and animal produce covering the war years are shown in Table I:-

Table 1

Principal Items of Agricultural Produce Exported, 1915-1919
(All figures in millions)

Fiscal Year Ended Mar. 31	Total Agricultural & Animal Products	Wheat		Wheat Flour		Butter	Cheese	Bacon &hams	
	$	bu.	$	bbls.	$	lbs	lbs	lbs	$
1915	209.1	71.9	74.3	5.0	24.6	2.7	137.6	94.8	14.5
1916	352.5	157.7	172.9	6.4	35.8	3.4	169.0	153.6	27.1
1917	501.2	189.6	244.4	7.4	47.5	8.0	180.7	211.6	43.8
1918	740.5	150.4	366.3	9.9	95.9	4.9	169.5	207.8	60.1
1919	469.7	41.8	97.0	9.2	99.9	13.7	152.2	124.7	40.2

Manufacturing. Manufacturing acquired a new and important export position during the war. Prior to the war, probably less than 7% of the total net value of all manufactured goods produced in Canada was sold abroad, whereas the percentage exceeded 40% from 1916-18. The significance of this change was all the greater because exports from 1916-18 did not appreciably reduce the volume of manufactured commodities available for domestic consumption.

War demands naturally stimulated iron and steel, and chemical and allied industries for munitions production. Shipbuilding was also actively pursued, with wage earners in 1917 averaging 11,370, and in 1918 averaging 20,348. Pulp and paper was another industry which expanded, though the impetus in this case came from newspaper demand in the United States rather than Overseas. Depletion of natural resources in the United States, together with curtailment of former supplies of Scandinavian paper to that market, opened a tremendous field for the Canadian pulp and paper industry.

Salient/

Salient export statistics for manufactures covering the war period are shown in Table II:-

Table 2.

Principal Industrial Export Items 1915-1919
(All figures in Millions)

Fiscal Year Ended Mar. 31.	Total Exports Manuf. Goods	Cartridges, Guns Rifles, etc.	Explosives and Fulminates	Newsprint		Woodpulp (Chemcical & Mechanical)	
	$	$	$	cwt.	$	cwt.	$
1915	85.5	0.2	0.3	7.3	14.1	8.6	9.3
1916	242.0	73.9	7.1	9.3	18.0	8.1	10.4
1917	477.4	240.3	40.9	10.8	23.6	11.4	20.4
1918	636.6	351.3	35.0	12.1	34.0	9.7	25.6
1919	555.4	213.4	37.5	13.2	40.7	11.8	34.7

Mining. Normal mining activity was continued in coal production, while new development was concentrated upon base metals, the latter being virtually new exports for Canada. Exports of copper and lead in various unmanufactured forms totalled 73,300,000 lbs. in the fiscal year 1914-15, and had a value of $7,600,000. They had increased to 127,700,000 lbs. with a value of $22,900,000 in 1916-17, and for the following two fiscal years declined below 90,000,000 lbs. with values around $11,000,000. Nickel exports between 1914-15 and 1917-18 increased from 45,400,000 lbs. to 82,700,000 lbs., with value rising from $5,100,000 to $9,000,000.

Waterpower. Hydro-electric development in Canada during the war was an ancillary aid to industrial expansion, notably for the growing pulp and paper industry. In the four years ended December 31, 1918, installation had been increased by 427,400 H.P., or 22%.

External Trade. Prior to the outbreak of war Canada's merchandise imports had exceeded exports continuously for some years. While the Great War reversed this relationship between exports and imports, Canada's import trade was nevertheless substantially increased by war, particularly in manufactures and mineral produts.

Imports of all manufactured products in Canada for the fiscal year 1914-15 of $286,200,000 increased to $531,700,000 for the fiscal year 1917-18, with iron and steel and textiles rising very substantially both in value and in volume. For the same period articles for the Army and Navy imported from the United States increased from $2,700,000 to $129,200,000. Also from the United States, coal imports had increased from 13,500,000 tons to 21,600,000 tons, while oils, including petroleum products, increased from 239,200,000 gallons to 360,400,000 gallons.

Canada's aggregate external trade for 1914-15 was $917,400,000, to which imports contributed $456,000,000, or 50%, Canadian exports $409,400,000 or 45% and re-exports $52,000,000, or 5%. For 1917-18 Canada's total external trade reached the unprecedented value of $2,549,700,000, to which imports contributed $963,500,000 or 38%, Canadian exports $1,540,000,000, or 60%, and re-exports $46,100,100, or 2%. These figures illustrate the tremendous growth in money value of Canada's export and import trade, and clearly suggest that substantial rise in volume also occurred.

Statistics showing thevalue of Canada's export and import trade are shown in Table III.

Table/

Table III

Principal Exports and Imports, 1914-19
(Values in Millions of Dollars)

Fiscal Year Ended Mar. 31	Total Canadian Export to: All Countries	U.K.	% Tot.	U.S.	% Tot.	Total Imports from: All Countries	U.K.	% Total	U.S.	% Total
1914	431.6	215.3	49.9	163.4	37.9	619.2	132.1	21.4	396.3	64.0
1915	409.4	186.7	45.6	173.3	42.3	456.0	90.2	19.8	297.1	65.2
1916	741.6	451.9	60.9	201.1	27.1	508.2	77.4	15.2	370.9	73.0
1917	1151.4	742.1	64.5	280.6	24.4	846.5	107.1	12.7	665.3	78.6
1918	1540.0	845.5	54.9	417.2	27.0	963.5	81.3	8.4	792.9	82.3
1919	1216.4	540.8	44.5	454.9	37.4	919.7	73.0	8.0	750.2	81.6

Transportation. Transportation reaped the benefits of tremendously increased external trade. Freight carried on Canadian steam railways for the year ended June 30, 1915 of 87,200,000 tons increased to 127,500,000 tons for the year ended June 30, 1918, while the average number of employees increased from 124,142 to 143,493.

Domestic Trade. Domestic trade was stimulated during the war boom, as reflected by records for department and mail order sales, telephone installations, and increased employment in textile industries. As another illustration of growing domestic prosperity, in 1915, 89,944 motor vehicles were registered in Canada, and by 1918 the number had tripled to 275,746.

In retrospect, Canada's contribution to the Great War from the standpoint of production was magnificent, particularly when it is realized that by the end of the war nearly 500,000 Canadians had withdrawn from production work to Active War Service. Wartime employment of women, more complete utilization of workers and machinery through longer hours, and transfer of labour from production of capital goods to production of staples, were the main factors responsible for Canada's significant output of war supplies.

b. Prices and Wages

Prices. After the first year of war general wholesale prices were only about 4% above their level of August 1914, with non-ferrous metal products showing the most appreciable gain. Prices for producers' goods, raw materials and farm products had climbed for five or six months, but had subsequently lost the gains made. Consumers' goods had remained practically stable and so had the cost of living.

From the autumn of 1915 to mid-1917 prices for all groups advanced, general wholesale prices rising by more than 75% between September 1915 and June 1917. Producers' goods and raw materials rose sharply, rising about 26% and 13% more than consumers' goods and manufactured goods respectively. Canadian farm products, which advanced about 110%, exhibited the most pronounced increase. Cost of living advanced by 30% in this period, with the most marked increases in food prices.

It should be noted that the abundant wheat crop of 1915 retarded rise in food prices. Average monthly price for No. 1 Northern Wheat at Winnipeg of approximately $1.19 in August 1915 had increased to $1.49 in August 1916, and to $2.73 in May 1917. The latter two price increases were not only due to the general upward price trend in commodities, but were caused by lower wheat supplies from disappointing crops in both 1916 and 1917. Wheat stocks in Canada of approximately 33,300,000 bushels at August 31, 1916 had dropped to 8,800,000 bushels by August 31, 1917, and to 4,100,000 bushels by August 31, 1918.

In/

In June 1917 food control was initiated in Canada mainly through regulations and licenses affecting restaurants, food manufacturers and dealers. As illustrations, manufacture and free import of oleomargarine were permitted, the use of sugar was restricted, and grain for distilled liquor was disallowed. Definite rationing and rigid limitations of food purchases, however, were not introduced, and civilian consumption of most foodstuffs was not appreciably altered. A Board of Grain Supervisors was established in June 1917 to control the disposition of the 1917 grain crop; the Board also had power to fix maximum prices for grain. Wheat prices remained fairly constant thereafter.

The following month a Fuel Controller for Canada was appointed to take charge of the coal situation where demand was exceeding supply. Since scarcity of labour had tended for some time to reduce the output of coal mines in the Maritimes, efforts were made to increase Canadian production. Efforts were also made to distribute coal supplies equitably, since imports of coal from the United States were in danger of being curtailed through congestion of railways and also through labour difficulties in United States mines.

From June 1917 to December 1918 general wholesale prices rose about 12%--a much less marked increase than the 64% rise of the preceding year and a half. The cost of living, dominated by upward price trends for clothing, fuel and food, advanced 18% compared with 27% in the preceding year and a half. Canadian farm prices over this period fluctuated more widely than other groups, and by the end of 1918 were still slightly below their peak of May 1917. The gap between consumers' and producers' goods had been closed, while the prices of manufactured goods had overtaken raw materials.

Between August 1914 and November 1918, i.e., for the war period, price indexes for various groups were as follows:-

Table 4.

Price changes, 1914-18
(All data converted to base 1914-18=100)

A. Wholesale Prices	Aug.1914	Nov. 1918	War Increases
All Commodities (General)	71.6	143.8	100.8%
Canadian Farm Products	71.4	138.1	93.4%
Raw & Partly Manufactured Goods	73.4	136.1	85.4%
Fully & Chiefly Manufactured Goods	70.9	143.0	101.7%
Producers' Goods	72.9	139.6	91.5%
Consumers' Goods	78.7	139.0	76.6%
B. Retail Prices			
Cost of Living	84.9	131.2	54.5%
Food	79.2	139.1	75.6%
Rent	100.8	111.9	11.0%
Fuel	93.0	121.9	31.1%
Clothing	76.7	139.0	81.2%
Miscellaneous	90.4	123.1	36.2%

Rates for various services probably increased proportionately during the war, though precise monthly statistics do not exist. Studies of index numbers ~~for~~ freight rates, however, show that general freight rates by ~~August~~ 1918 were about 37% higher than they had been in September 1914.

Wages.--Wages in Canada during the war years rose to meet higher costs of living. Unfortunately, while monthly data for comprehensive analysis and accurate timing of wage increases are not available, annual averages shown in Table 5 indicate the general trend:-

Table 5. Index Numbers of Rates of Wages for Various Classes of Labour in Canada
(Converted to base 1914=100)

Year	Building Trades	Metal Trades	Printing Trades	Steam Rlys.	Coal Mining	Common Factory Labour	Logging and Saw Milling	Metal Mining	General weighted Average
1914	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1915	100.7	101.1	101.1	99.8	100.5	100.0	96.3	101.3	100.7
1916	101.6	106.5	103.3	103.8	109.7	109.2	112.3	111.9	107.7
1917	109.0	127.4	108.6	122.1	128.5	127.9	142.3	124.1	123.6
1918	124.9	154.5	120.7	155.0	154.9	150.8	162.3	134.8	145.1

It will be observed that wages for logging and saw milling, metal mining, coal mining and common factory labour increased most appreciably between 1914 and 1916. In the following two years for building, metal and printing trades, and for steam railways, also showed substantial increases. By 1918 the general average wage for various kinds of labour in Canada had increased about 45% from 1914. Inasmuch as the cost of living had increased by about 54% during the war, the industrial wage increases during the actual war years do not appear to have been excessive in relation to other price levels.

Wages of male farm help in Canada for the summer season of 1914 were about \$21 with board per month, and had increased to around \$40 with board per month by the summer season of 1918. These figures suggest that wages for farm workers in Canada increased relatively more than those in industrial labour.

Notwithstanding the significant increases in prices and wages during the war, Canada's really serious inflation was still ahead.

c. Government Finance and Monetary Policy

Financing expenditures in the first year of war were satisfactorily met. The British Government agreed to loan Canada all funds required to pay for war costs, while capital expenditures of about \$90,000,000 were made mainly through a loan in London and a fiduciary issue of Dominion notes. The latter raised bank cash reserves in Canada by 30%, and paved the way for a large expansion of credit. With considerable numbers of unemployed available for war production to meet increasing war orders, the volume of credit could be extended without marked inflation and business activity thereby stimulated.

Financing became an acute problem during 1915-16, with mounting war costs and curtailment of British remittances for war purchases in Canada. While the British Government agreed to continue paying Canadian expenditures overeas, it was necessary to find money elsewhere for war costs incurred in Canada itself.

Savings of Canadians were called upon in the Autumn of 1915 to supply domestic funds required and immediately demonstrated their strength, hitherto latent and untried. Allied munitions contracts and an excellent wheat crop had promoted prosperity in the country. Accumulated funds had increased through larger profits and generally higher incomes accompanying fuller employment and rising prices. From this point on, war expenditures in Canada were financed almost entirely in the domestic market, aside from \$75,000,000 bonds and \$100,000,000 2-year notes borrowed in New York in March 1916 and August 1917 respectively.

As war progressed demands for war goods increased. Unemployment and unused productive capacity had virtually disappeared and enlistments had further depleted supplies of labour. It became necessary to take new steps to expand war production.

Inflation/

Inflation was the general method adopted. On the security of Treasury Bills, the Dominion Government borrowed from the banks and used the funds to pay for war materials. This credit expansion, together with rising prices for exports, provided higher money incomes for many Canadians and swelled business profits. From these large surpluses of money the Government was able to borrow through Victory Loans floated in the domestic market. As an indication of the concentration of money in the hands of certain sections of the community, it has been estimated that over three-quarters of total war loan subscriptions came from business organizations, financial institutions, and wealthy persons.

Taxation measures were introduced, including taxes on business profits, increased customs duties and excise taxes on certain commodities, and war taxes on transportation, tickets, cheques, telegrams, etc. Incidentally, income tax was first levied in Canada in 1917. While these taxation measures doubtless seemed far-reaching and significant at the time, they seem negligible and small compared with taxation during the present war. Moreover, revenues produced from these taxes were practically offset by interest requirements on sharply mounting debt and by higher commitments on current account. Canadian Government War Bonds during the Great War carried tax-exempt coupons of 5% and 5½%, implying heavy service charges on the Dominion's rapidly growing debt.

Table 6. Dominion Government Revenue & Expenditure
(Fiscal Years ended March 31, 1915-1919: all figures in millions of dollars)

Items	1915	1916	1917	1918	1919
	$	$	$	$	$
Ordinary expenditures	136	130	149	178	233
Capital expenditures and investments	87	45	73	128	47
	223	175	222	306	280
Less--Current revenues	133	172	233	261	313
Deficit (-) or surplus (+), excluding war	-90	-3	+11	-45	+33
Expenditures on war and demobilization					
Overseas	9	38	125	191	158
In Canada	52	128	182	153	289
	61	166	307	344	447
Total deficit (financed by borrowing)	151	169	296	389	414

Common stock prices (general weighted index) moved up moderately from mid-1915 to the end of 1916, and then moved down again to early 1918, after which their upward movement was renewed. By the end of the war, prices were slightly above their pre-war level, the major gain in industrial stocks being counteracted by the drops in utilities and bank stocks.

Government bond yields increased from around 4½% to 5% in late 1915 when the first large public loan ever offered in Canada was floated. They continued to fluctuate around the 5% level until the spring of 1917, and then gradually advanced to 6% by the end of 1917, where they held quite steadily until the end of the war. In view of the credit expansion facilitated by the banks and the continuous and marked advances in commodity prices, the behaviour of bond yields during the war reflects confidence in the Government's monetary policy.

Canada's war prosperity is frequently attributed solely to export demands for larger quantities of foodstuffs and munitions at rapidly rising prices. However, other supporting factors should not be overlooked. For instance, the pegging of the pound sterling

in New York brought stability to the Canadian dollar, thereby enabling Canada to buy raw materials and partly finished goods from the United States for manufacture of war materials in Canada, at lower cost than might otherwise have been the case. Again, United States banks were in a peculiarly strong position to expand their credit to accommodate Allied war orders; money incomes throughout the United States rose so rapidly that a huge domestic bond market was created in the United States. Canadian credit stood high in that market, which greatly facilitated borrowing from the United States in the earlier stages of the war. Again, North America was geographically the logical continent from which short-haul to Europe via the North Atlantic shipping route could be effected.

While war demand stimulated economic activity throughout all regions of the Dominion, British Columbia was somewhat handicapped. With the Panama Canal not yet available, high ocean and rail freight rates probably curtailed British Columbia's exports of fish, lumber and base metals. In Ontario and Quebec accelerated industrial activity was most marked. From the Maritimes to Alberta--areas tributary to the North Atlantic--war export requirements stimulated agricultural, fishing, lumbering and shipbuilding areas, as well as coal mining in Nova Scotia, and iron and steel plants.

With the cessation of hostilities in November 1918, Government war expenditures abated but slightly, credit expansion continued, and exports remained at high levels. The volume of money in Canada (as represented by public savings and demand deposits and active note circulation) of $1,979,000,000 at October 31, 1918 compared with $1,134,000,000 at August 31, 1914--an increase of almost 75%. Demobilization and re-establishment of returned men in civil life and post-war readjustments in industry and international trade made heavy inroads upon the economic solidarity of the country.

That the Government of the day was not unmindful of problems which might beset Canada's economy after the war is evidenced by the establishment in October 1917 of a Reconstruction and Development Committee to deal specifically with these problems.

Definite plans were made for re-establishment of returned men. For example, questionnaires were sent to all soldiers ocerseas to ascertain the probable distribution of returning men by trades and territorial areas.

Details concerning plans which may have been made for industrial, agricultural and general readjustments to peace-time economy in Canada seem indefinite and obscure. Indeed it is possible that such plans were considered relatively un-importent; it may have been hoped that economic readjustments would be effected automatically as the trends of peace-time development and international trade became more clarified. In this connection it should be remembered that Canada's war-time prosperity was based to an important extent on an export trade which had been built up in abnormal and non-competitive markets. Since pre-war prosperity had been related to internal expansion, there was no experimental criterion upon which to formulate Canada's prospective position in competitive markets of a greatly changed world.

II. The Postwar Years: Principal Factors

Demobilization and Re-establishment. When the Great War ended, Canada had about 375,000 soldiers on strength, of whom around 300,000 were Overseas. As a result of the questionnaire completed by all men overseas those in charge of re-establishment had a fairly good working estimate by March 1919 concerning the occupation and districts these returned men would normally prefer. Through co-operation between the Provincial Governments and the Department of Labour a chain of employment offices was rapidly extended, and by June 1920, when this branch was demobilized, the actual number of men placed totalled 109,493. Demobilization was actively effected in the first half of 1919, and practically completed by the Autumn of that year. Towards the close of 1919 it became apparent that re-establishment was not a complete success, and special unemployment relief of almost $5,000,000 given in cash was expended during the winter of 1919-20. The following winter this special relief expenditure had been reduced to $1,500,000, given in kind in lieu of cash.

Assistance was also given to returned men towards vocational training and completion of university courses, and to soldiers wishing to settle on farms. Loans for the latter purpose had reached about $82,600,000 by March 31, 1921.

Pension payments were naturally heavy, for war had cost Canada over 56,600 lives and about 150,000 wounded. The percentage of permanently disabled men was high. Cost of pensions to March 21, 1921 was about $91,000,000.

Aggregate re-establishment costs for returned men to March 31, 1921 totalled approximately $442,700,000, including $164,000,000 for gratuities upon demobilization, $102,300,000 for re-establishment, $2,800,000 for transportation of dependents, and the foregoing amounts for pensions and farm loans.

Reconstruction and Industry. In the latter part of 1918 the Chairman of the Imperial Munitions Board wrote the following letter to all manufacturers of munitions:-

Imperial Munitions Board
Ottawa, October 24, 1918.

Dear Sir,-With a view to determining what classes of work could be carried on most advantageously by manufacturers at present producing munitions, we desire to compile certain data which may be of use to the organization which may be set up by the Government of Canada for dealing with the problems incident to the close of hostilities, whether this event be in the near or distant future.

We would be grateful to receive from you answers to the attached questionnaire, with such added information as you may consider may be of service. We appreciate that in some cases these answers must of necessity be approximations.

If the manufacturers having contract relations with the Board to whom this communication is addressed extend to us their confidence in supplying the information desired, care will be taken to treat the information as confidential.

Upon receipt of the replies we will tabulate the particulars without names and will hand them over to the Government authorities here. Later, if the Board is asked for details in particular, we will communicate with the manufacturers before supplying them.

Yours faithfully,
(Signed) J. Flavelle,
Chairman

The/

The questionnaire attached ran as follows:

1. How many men have you now employed on purely munitions work? and how many women?

2. What percentage of your present complete turnover does your munitions business represent?

3. What percentage of your complete personnel do those employed on munitions represent?

4. What are the staple lines which previous to the war represented the larger part of your Company's turnover?

5. Have you previously done export business to any appreciable percentage of your turnover? If so, what percentage?

6. With what countries did you do this export business?

7. If you have not actually exported goods, have you at any time investigated into the possibilities of exporting articles such as you manufactured prior to the war? If so, what were the results of such investigations? What action do you consider it would be desirable to take to secure such export business?

8. Have you formulated any plan for the use of your munitions equipment, or for otherwise adding to your lines at the conclusion of the war? If you are warranted in doing so, we will appreciate being advised what such plans contemplate. *

Search for the material resulting from this enquiry has proved fruitless. Unfortunately no record appears to be available concerning the nature of the response, or such action as was taken. In any case, no government organization appears to have been actually set up to coordinate or direct industrial and trade adjustments in Canada. One of the reasons, at least, was that the industries most directly affected were still a comparatively small proportion of the total Canadian economy.

Economic Fluctuations and Timing. From careful study of the specially prepared charts, supplemented by historical information and other records the following derive as the principal economic trends and fluctuations of the period:

(a) Canada experienced mildly diminished business activity in the early months of 1919. This period was characterized by transition from an economy of war to one of peace.

(b) Canada experienced general expansion in business activity from approximately the middle of 1919 to the middle of 1920. This period was characterized by sharp rise in prices, marked consumer demand, higher basic wages, increased production and speculative activity.

(c) Canada experienced pronounced business recession from about the middle of 1920 to the middle of 1921, with less marked recession extending into 1922. This period was characterized by sharp decline in prices, lower production levels and employment, depressed agricultural markets and weakened financial factors.

(d) Canada experienced mild recovery from the early part of 1922 to the end of 1923. This period was characterized by slack business, but resumption of sustained recovery became definitely established.

A further summary is added following the movements shown by more detailed examination of the individual series and their economic grouping.

III./

* From David Carnegie, The History of Munitions Supply in Canada, 1914-1918, Longmans 1925; p. 278.

III. The Post War Years: Detailed Sequence

(a) The Immediate Post-War Period to Mid-1919.

Production and Trade. Restoration of peace naturally precipitated rapid and heavy declines in employment and production of iron and steel products and chemicals and allied products, since war manufactures of munitions and explosives were no longer necessary. These declines were compensated partly by steadily increased employment in furniture manufacturing, textiles, clothing trades, rubber manufacturing, and other consumers' goods. There was also higher employment in shipbuilding and repairs, where many former munition workers found jobs.

For July 1919 wage earners in all manufacturing industries totalled about 600,000, compared with 622,000 a year earlier-- a decrease of less than 4 percent. From these figures, together with analysis of monthly charts for many trades, it appears that Canadian manufacturing production and employment were not seriously interrupted by readjustments in the immediate post-war period.

In considering employment during this period the position of women and older workers should be recognized. Doubtless some women and many older workers who had responded to the urgent need for labour during the war, and were classified amongst employees in July 1918, had voluntarily become unemployed by July 1919 and returned to their normal household tasks or retirement. Such unemployment would not necessarily be due to lowered business activity.

It should also be recognized in considering employment data that technological improvement which had been gained by war production experience, might conceivably curtail the number of workers required in many new industries, and at the same time increase the number of workers employed in new expanding industries. Motor cars, for instance, were becoming more widely acquired by larger numbers of people for an increasing number of purposes; this development would imply greater activity in rubber and petroleum industries, automobile parts, and indirectly promote more employment on highway construction.

The percentage of unemployment in trade unions in February 1919 reached 5.23%, which was not an alarming percentage for this time of the year, particularly since trade union membership usually includes a relatively high proportion of skilled labour.

Monthly data for retail trade, as measured by department and mail order sales, suggest that consumer buying power in Canada was well maintained in the early part of 1919. Since mail order sales were slightly lower than department store sales, it might perhaps be inferred that rural reaction in this period was somewhat more pronounced than urban reaction.

Residential building activity often offers a clue to business levels, but such activity would not be vigorously pursued in Canada from November to April. However, residential building contracts placed in February and March of 1919 were over three and four times those placed in February and March of 1918 respectively. This fact is at least an indication that no definite depression existed or was anticipated at this time, for people do not then place contracts to build houses.

Export and import data for this period were naturally lower than the preceding winter, due to unsettled and indefinite conditions in Europe. It is difficult, however, to gauge a great deal from exports and imports during the highly seasonal winter months.

Prices. The business tempo of this period was not lowered sufficiently to effect any marked change in the general trend of prices, as occurred, for example, in Great Britain.

Prices/

Prices of raw materials and manufactured goods, consumers' and producers' goods, and farm products tended downward for the first month or two of 1919, likewise the cost of living. All declines were minor in extent, with the maximum drop for any group being under 4%.

Finance. Financial factors for early 1919 substantiate the view that immediate post-war recession was extremely mild. Savings deposits reacted almost exactly as they had in early 1918 when war prosperity was at its height. From November 30, 1918, which showed a sharp drop due to the record Second Victory Loan, savings deposits increased each month and the drop had been almost rebuilt by April 30, 1919. Current loans--where reaction lagged somewhat behind business changes--dropped about 9% in five months ended August 31, 1919, indicating that some recession had occurred. Call loans--which usually anticipate speculative uncertainty--also experienced a noticeable drop in January and February 1919, but increased the following month. General common stock prices--after slight hesitation immediately after the war--resumed their upward trend, advancing over 9% in the first five months of 1919.

(b) The Post-War Boom Mid-1919 - Mid-1920.

Renewed business activity soon reasserted itself and by the middle of 1919 an intense post-war boom had been initiated. This boom is usually attributed mainly to credit expansion in the United States and to the need for goods in Europe once peace had been restored. Purchase of inventories of goods were over-extended with more pronounced buying in consumers' goods than in producers' goods. With ample credit available, the demand for goods became so excessive that prices rose sharply, wages went still higher and speculative activity increased. Most countries of the world experienced a similar period of inflation, in which the attendant expansion proved to be artificial and misdirected prosperity.

Production and Trade. In July 1919 wage earners employed in manufacturing industries totalled about 600,000 and had increased to 633,000 by July 1920. Employment continued its upward trend in manufacture of furniture, rubber goods, clothing,boots and shoes, and leather, while sharp increases began in building, electric appliances, machine tools, pulp and paper, and automobiles. For the most part, manufacturing production continued to concentrate on consumers' goods, with heavy industries lagging in the upswing.

Percentage of unemployment in trade unions in December 1919 was 4.3%, which was not appreciably higher than the 2.5% of unemployment in December 1918. By June 1920 this percentage had declined to 2.1%.

Retail trade was very active, with employment in department and mail order stores at record highs for the 1919 Christmas trade. Transportation business was stimulated from the middle of 1919, according to monthly data for ton miles of revenue freight and employment for one large railway company. While the wheat crop of 193,000,000 bushels was only fractionally larger than the 1918 crop, at prevailing prices it had the highest value then on record.

Exports and imports both expanded in value, the latter showing the most marked advance. Imports for the fiscal year ended March 31, 1920 of $1,064,500,000 had the highest value in the country's history. Exports of Canadian produce valued at $1,239,500,000 were $3,000,000,000 below the previous record value for 1917-18, but the decline had occurred entirely in exports to the United Kingdom.

Prices. Prices advanced very substantially during this period, general wholesale prices increasing by 26% between July 1919 and July 1920. Raw and manufactured goods both rose about 29%, consumers' goods 24% and producers' goods 28%. Prices of Canadian farm products reached their peak in May 1920-- two months earlier than the other/

other groups--when they were 25% above the level of July 1919.

The cost of living advanced by about 20% between July 1919 and July 1920, with the most pronounced rise occurring in the latter half of the period. Higher prices for food and clothing were mainly responsible for the rise in cost of living.

Wage rates for various classes of labour continued upward, the annual average for 1920 gaining 19% over the annual average for 1919, whereas 1919 had gained 17% over 1918.

Wages of male farm help in Canada during the summer season of 1919 had been around $54 with board per month. They increased for the summer season of 1920 to $60 and board per month. This increase was probably more moderate than it might otherwise have been due to the larger 1920 wheat crop of 301,000,000 bushels.

Freight rates, which normally lag somewhat behind other price changes, remained practically unchanged until September 1920, when they increased by about 32%, with the most pronounced gains for hauls of agricultural and forest products.

It should be stressed that the rise in prices was more pronounced from mid-1919 to mid-1920 than it had been at any time during the war itself. Inflation reached its height with the break of mid-1920. It is difficult to see how this price inflation for mid-1919 to mid-1920 could have been prevented without concerted and co-operative international action.

Finance. Financial factors continued to exhibit strength. Volume of money in the hands of the public expanded from $1,992,000,000 on June 30, 1919 to $2,160,000,000 on June 30, 1920. Savings deposits advanced sharply and the Government floated its fifth Domestic War Loan in November, making Dominion bond interest taxable for the first time. By the middle of 1920 savings deposits and the volume of money were still rising.

Current loans, following decline in the second quarter of 1919, mounted sharply throughout the remainder of the period. Call loans which had started their upward trend early in 1919 advanced rapidly and reached their peak in January 1920, thereafter falling.

Stock prices fluctuated throughout the period around the level of mid-1919-- an indication that stock speculation may have been held in check through discounting of values inherent in a boom dominated by consumer demand.

Exchange rates in Canada until this time had remained fairly stable. Late in 1919, however, a downward trend began for sterling in Canada, while United States dollars in Canada moved upward. These exchange reactions synchronized with Canada's enlarged adverse trade balance with the United States and her enlarged favourable trade balance with the United Kingdom.

Government expenditures, with rising costs for soldiers' settlement, pensions, interest on debt, and capital expenditure more than offsetting the decline in direct war expenditure, were higher for the fiscal year ended March 31, 1920, than for any preceding fiscal year. On the other hand, current revenues were larger than they had been in any preceding year. Nevertheless, the Government's total deficit of $533,000,000 for the fiscal year was the largest on record.

(c) Post-War Depression, Mid-1920-22, and (d) Recovery to end of 1923.

Once the peak of the inflationary post-war boom had been reached around the middle of 1920, business reaction permeated the economic structure and sharp deflationary recession occurred. The depression reached the nadir of the downswing for some economic factors around the/

the middle of 1921, but was not reached for other factors until the beginning of 1922, after which there was general recovery to a moderate degree, with slack business persisting throughout 1923.

Regionally, the depression affected Nova Scotia and the Prairie Provinces most seriously. The former province depended largely on shipbuilding, fisheries, coal mining and the iron and steel industry--activities which reacted severely. The prairies faced major dislocations between prices and costs. Purchases of farm lands, large mortgages thereon, and heavy taxation levied to provide roads, schools, telephones and other facilities for settlement, had created fixed overhead costs which were out of alignment with falling prices for agricultural products. In British Columbia the depression was sharp, with the major contraction in forestry, but it was not as prolonged as in Nova Scotia or the Prairies. Recovery in British Columbia was expedited through utilization, after 1921, of the Panama Canal shipping route.

Naturally the break in boom conditions did not occur simultaneously for all phases of business activity, since some factors exhibit lags, while others precede the general trend. Moreover, highly seasonal variations characterize the behaviour of many economic measurements and thereby preclude precise timing and sequence analysis.

Production and Trade. Total employment in manufacturing industries in Canada dropped approximately 21 percent between June 30, 1920 and June 30, 1921, male employees declining from about 410,500 to 327,200 and female employees from around 106,000 to 79,500, male and female employees numbered approximately 310,600 and 89,500 respectively on June 30, 1922, and increased to 362,000 and 96,000 respectively on June 30, 1923. The low point for total male and female employees combined was reached in December 1921, but as this month is seasonally low, the precise turning point of the recovery cannot be gauged.

As one interesting feature in manufacturing employment, female employees decreased sharply only for the short period from late autumn of 1920 to January of 1921, and then followed a stable and slightly upward trend continuously to the end of 1923. This fact suggests that the heavy industries, where male employees would naturally predominate, were most seriously affected.

A broad idea of the distribution and extent of the post-war depression and subsequent recovery can be obtained from a study of the following employment data for various manufacturing industries:

Table 7.

Post-War Employment changes in Principal Canadian Industries, 1920-23

Industry	Employees on Payroll			
	June, 30/20	June 30/21	June 30/22	June 30/23
Iron & Steel Products Mnfg.	108,000	62,000	63,000	78,000
Saw, Lath & Shingle Mills	52,000	40,700	42,400	46,000
Housebuilding	38,000	32,000	30,000	----
Wood Pulp & Paper Products	27,000	18,400	23,400	27,000
Cotton Manufacturing	17,500	15,000	19,000	19,000
Non-ferrous Metal Mnfg.	15,100	11,200	11,200	14,100
Shipbuilding & Repairs	14,000	5,900	3,500	----
Boot & Shoe & Leather	12,000	11,200	11,500	11,900
Chemicals & Allied Products	11,600	6,400	7,600	8,500
Automobiles & Automobile Parts	11,100	7,300	9,300	11,400
Electric Apparatus & Supplies	11,100	8,300	7,700	10,500
Fish Canning & Curing	10,900	7,900	9,300	10,600
Furniture	8,900	5,800	6,700	8,000
Slaughtering & Meat-Packing	8,200	6,600	6,900	6,800
Flour & Gristmill	5,200	4,300	3,900	4,200
Petroleum Refining	3,700	3,600	3,300	4,400
Clothing	----	16,000	19,000	20,000

Manufacturing in iron and steel, chemical and allied products, woodpulp and paper, and non-ferrous metal industries, followed the general trend closely, rapidly declining from mid-1920 to mid-1921, and then tending more moderately downward towards the end of 1921, after which recovery was in evidence. These four industries absorbed approximately 31% of total employees in manufacturing in mid-1920, and absorbed only 24% in mid-1921, with iron and steel showing the most pronounced drop and the least recovery.

Production of consumers' goods declined much more moderately and earlier than producers' goods, though the extreme dispersion of the data from month to month precludes definition of clear turning points. Recovery appears to have commenced for producers' goods at the end of 1921, and somewhat earlier for consumers' goods.

Unemployment in trade unions of 2.1% for June 1920 had declined to 16.5% by March 1921, after which a seasonable upswing had reduced the percentage to 13.2% by June 1921. Corresponding percentages for June 1922 and June 1923 were 5.3% and 3.4% respectively.

Retail trade, as illustrated by department and mail order sales and employment, exhibited customary seasonal aberrations. However, the smoothed trend for this period indicates that employment and value of sales in city department stores tended downward from late 1920 to the beginning of 1921, then levelling out until around the middle of 1922, after which they moved upward. Employment and value of sales in Western mail order stores declined earlier and were much more marked, with their low levels more protracted.

Telephone installations declined sharply from the spring of 1920 to the spring of 1921, when they reached the lowest point since the spring of 1918. From the spring of 1921 onwards the general trend continued upward throughout 1923.

Transportation must have reacted adversely in the marked downward swing, since wages andsalaries paid to employees of Canadian steam railways for the month of July aggregating $25,500,000, had dropped to $20,200,000 or by 21% for July 1921. Ton miles of revenue freight for one large railway company in June 1920 dropped to the lowest level since August 1915. Employees on its payroll in the spring of 1921 had been reduced by 30% from July 1920, and after partial recovery, again reached the same low level in February 1922, after which there was slight improvement.

Values for monthly exports and imports, duly smoothed to lessen seasonal dispersion, showed pronounced declines from mid-1920 to the autumn of 1921, and thereafter showed resumption in recovery. The drop in exports was particularly marked. Gauged by indexes, which are obviously rough measures for monthly external trade, the volume of exports and imports pursued a similar trend.

Table 8.

Canada's External Trade--1919-24
(Fiscal Years ended March 31: all figures in Millions of Dollars)

Fiscal Year ended Mar. 31	Total Value Canadian Exports	Re-Exports	Imports	Total Trade	Excess of Exports over Imports (Favourable Trade Balance)
1919	1216.4	52.3	919.7	2188.5	349.1
1920	1239.5	47.2	1064.5	2351.2	222.1
1921	1189.2	21.3	1240.2	2450.6	- 29.7 (a)
1922	740.2	13.7	747.8	1501.7	6.1
1923	931.5	13.8	802.6	1747.9	142.7
1924	1045.4	13.4	893.4	1952.1	165.4

(a) unfavourable trade balance.

Prices. Between July 1920 and July 1921 general wholesale prices declined 36%--back to approximately the level attained in March 1917. In the short space of one year the gains which had been accumulated over the preceding 2 3/4 years were entirely obliterated. Prices of raw materials and producers' goods declined earlier and further than finished and consumers' goods. The most marked collapse of all occurred in prices of farm products, particularly of wheat and hogs.

After June 1921 the general wholesale price decline was interrupted for two months, and was then resumed at a less rapid pace for the rest of the year, after which prices became fairly stabilized at levels which had prevailed at the end of 1916. All groups behaved similarly in trend with prices for consumers' goods above prices for producers' goods. Manufactured goods levelled out slightly above raw materials, but the gap was much less pronounced than that between consumers' and purchasers' goods. Farm products reacted similarly, but experienced another drop in the spring of 1922, probably due to the large 400,000,000 bushel 1922 wheat crop.

The cost of living index declined by about 18% from July 1920 to July 1921--its level at the latter date being approximately that of May 1919. A moderated declining trend was continued into the spring of 1922, after which living costs stabilized slightly above the mid-1918 level. The entire drop for the cost of living from the middle of 1920 to the spring of 1922 amounted to 23%, which was considerably less than the corresponding drop of around 42% in general wholesale prices. In the most marked decline from mid-1920 to mid-1921, retail prices of food dropped by about one-third, while clothing costs dropped by about one-quarter. Rents moved contrary to the general decline in prices and continued to rise throughout the entire period, while changes in fuel costs were moderate and exhibited no very marked price changes.

Wage rates for various kinds of labour averaged for the year 1921 about 9% below the 1920 annual average, and fell another 7% for the 1922 annual average. Annual wage figures, of course, do not throw any light on timing, but it may be assumed that they declined somewhat later than prices.

Data received from two individual steel companies show that basic wage rates were first reduced in January 1921 by about 10%, further reduced in June 1921, and for one of the companies, again reduced in November 1921. The lowest rates, which were approximately 20% below the highs prevailing before the recession, continued to the autumn of 1922, when they were raised. Basic wage rates for one large sugar refinery and for an oil refinery showed somewhat similar behaviour, though the first reduction occurred four months later than for the steel companies, and it was comparatively slight in the oil refinery.

Wages of male farm help in Canada during the summer of 1921 had fallen to about $45 with board per month, which represented a very substantial decline from the wages of $60 with board per month during the summer season of 1920. They decreased to about $38 with board for 1922, and then advanced to $40 with board for the summer season of 1923.

Freight rates were reduced slightly on January 1, 1921, with more pronounced reductions occurring on December 1, 1921 and on August 1, 1922, when the chief reduction occurred in hauls of agricultural products.

General common stock prices followed a marked downward trend from July 1920 to August 1921, dropping by 22% in this period. After August 1921 they climbed steadily and continuously upward throughout 1922, indicating that the severity of the depression had spent itself before 1922.

Finance/

Finance. Volume of money in Canada persisted upward until November 30, 1920, when it approximated the all-time high of $2,246,000,000. It then decreased steadily to August 31, 1922 when the total of $1,824,000,000 was almost 19% below the all-time high. Savings deposits, which usually lag considerably behind the general trend, did not decline until the early spring of 1921, and did not resume their upward trend until November 1922. Call loans and letters of credit, on the other hand, initiated downward trends early in 1920, reflecting anticipated speculative uncertainty concerning business developments.

An analysis of chartered banks' monthly data for this period strongly supports the timing and general conclusions for the post-war depression.

Exchange rates over this period varied with the changing balance of trade. The premium on United States dollars in Canada averaged 16% in December 1920, and then tended steadily to par after the middle of 1922. The discount on sterling in Canada fell to about 20% in February 1920, and after partial recovery fell again to more than 20% in October 1920. Sterling then experienced lesser gyrations and achieved almost parity early in 1923, only to drop slightly downward again.

The adverse reaction of price deflation on external trade was somewhat mitigated by these exchange fluctuations, and Canada's import and export position in her two leading trade markets was slightly eased.

Government bond yields remained surprisingly stable throughout the acute period from mid-1920 to mid-1921, indicating a sound and well-maintained credit position at home and abroad.

Dominion Government revenues fluctuated widely throughout 1920 to the middle of 1922, but smoothing suggests that they began to decline towards the latter part of 1920 and continued downward to the latter part of 1921.

Summary

Canadian data for the period 1914-23 are partial and incomplete, thereby precluding definite and clear conclusions which might be derived from parallel studies relating to the United States and the United Kingdom. In particular, there is no adequate information for Canada regarding inventories of stocks on hand and changes in capital investment. Thus, for example, it is not possible to formulate exact conclusions outlining the behaviour, as groups, for capital goods industries, consumers' goods industries, et cetera.

Nevertheless, from the foregoing analysis, some general observations are warranted. (1) Primarily, Canadian standards of living were well maintained during the Great War, with "real" incomes of many wage-earners appreciably higher. Canada's economy in the last war fared somewhat better than many other countries, particularly when it is realized that Canada actively participated with the Allies from the very beginning of the war. (2) Canada emerged from the Great War with a more closely integrated and maturer economy, international experience, proven strength of her own resources and potentialities, and a long-established unfavourable merchandize trade balance converted to a favourable excess of exports over imports. Canada's role in the world's last struggle was a worthy predecessor and perhaps an ominous indication of the still more powerful role she would be able to assume in the present crisis. (3) On the other hand, the war of 1914-18 was followed by intense inflation, sustained by rising demand for consumer goods throughout the Dominion; it culminated in the collapse of former "real" incomes and wartime living standards of wage-earners. (4) Serious unemployment which ensued was widespread, purchasing-power

of/

of both rural and urban consumers was sharply reduced and net income of producers substantially lowered. Finally (5) carrying charges on war loans were very heavy, aggrevated by the fact that major bond interest payments were "tax exempt". From these maladjustments Canada did not make any easy recovery. It is our obvious question to ask whether they could not have been avoided by appropriate national and international action, and to seek from these events lessons for means of conserving the gains and minimizing the losses this time.

IV. SOME RECOMMENDATIONS

The bearing of this study upon post-war problems arising out of the present war will require special contemporary analysis. It is not itself a complete basis for recommendations of forthcoming post-war policy. Nevertheless, the following observations are appended for consideration.

1. Prices

Prices as a whole were not controlled during 1914-23. They reacted primarily to demand from overseas countries. Great Britain, France, and the Allies competed freely with one another for their war supplies, and paid cash until early 1917. Canada and the United States could both sell similar products to these buyers, though aside from wheat, Canada could only furnish much smaller quantities. Prices were rising in the United States. Under these conditions an overall price control policy in Canada would have been detrimental to primary purchasers and wholly impractical for that time. Canada as a debtor country desperately needed all the outside trade money she could acquire.

Without a fully co-operative policy between the Allies (and including the United States from the very outset of war), Canada could scarcely have adopted any broad price control policy during the Great War. Great Britain, as the world's largest creditor nation in 1914, and holding the bulk of capital investment in Canada, was the dominant market to which Canadian prices responded. As war progressed, this dominance lessened in proportion as the United States market influence increased. By the end of the war Canada's price structure was extremely sensitive to, and in many fields almost controlled by, prices and wages in the United States.

In the Great War, expenditure for maintenance of Canada's Army overseas was charged on the basis of prices prevailing in Great Britain. Reciprocally, Canada was paid for goods she sold to Great Britain at prices prevailing in Canada. At the end of the war Britain's debit on Canadian account was approximately $400,000,000, which was duly paid. To-day the basic situation is disparate in relation to Great Britain, which no longer has large exchange resources to draw upon.

Inflation rose to its greatest height in Canada after the war because of the increasing expansion of currency and credit circulation, due to Government war expenditure, to demobilization costs, and to shortage of consumers' goods. Prices rose in all countries which had been engaged in the Great War, and the rise was more pronounced in some than in Canada. The deflation of prices was likewise world-wide.

Price control in the present war will meet its sternest test after the war, when it remains to be seen if carefully planned and timed de-control can succeed in avoiding marked inflation.

The public still needs to understand why inflation must be avoided after the war. Co-operation on the part of the public

could/

could greatly assist in the successful transition to price and wage controls adapted to post-war circumstances. To this end a practical cost-of-living measure should be evolved which would have realistic application to various standards of living, with adjustments for regions if necessary. Dissatisfaction with the present cost-of-living index as a standard for wage changes seems to be rather widespread even now. It should be clearly ascertained without delay whether or not this dissatisfaction is well founded, and appropriate steps should be taken to secure and maintain public confidence in some basic measure for changed living costs.

2. Monetary Policy.

Monetary policy after the last war was dictated, to a significant extent, by monetary policies in the United States and Great Britain. Irrespective of the location of capital invested in Canada, or of the merchandise balance of trade, the Canadian dollar is inextricably tied to the United States dollar and to the pound sterling. Any monetary measures in Canada towards stabilization of currency will naturally be related to whatever arrangements may be made between Great Britain and the United States. With the accomplishment of large-scale repatriation of Canadian securities payable in London, the influx of British capital, even on a small scale, and increased British imports of merchandize, might have a salutary effect upon Canada's monetary position in tripartite arrangements between Great Britain, United States and Canada. It would seem advisable to encourage domestic investment in Canadian industries and wherever possible to refund external Provincial and Municipal funded obligations by domestic issues. Maintenance of Canadian credit at home and abroad will greatly invigorate the whole economy of the country.

3. Consumer Buying.

Heavy consumer buying after the last war intensified the inflation marking the post-war boom. There appeared to be no deliberate policy or machinery to correlate the demand and supply of consumer goods. In this war, rationing, priorities, and price and wage controls may provide effective instruments to adjust consumer demand and supply.

In addition to careful use and timing of these de-controls, it might prove useful to formulate some policy whereby accumulated savings (including refundable taxes) of consumers could be released gradually into the market for consumer goods. For example, withholding taxes, investment of savings for housing or other productive purposes, or even for capital equipment in industry, compulsory insurance and health payments, et cetera, might help to retard and modify the impact of post-war consumer buying.

4. Tax Policy.

In the last war, taxes upon individual incomes and business profits were comparatively small--their retention or reduction could scarcely have provided a significant influence upon consumption or production of goods. In this war, taxes are major items in both individual and corporation budgets, and provide a powerful instrument to influence and correlate consumer buying and output of producers. Consequently, analysis of taxation after the last war throws little light on probable taxation after this war.

Naturally there are wide differences of opinion concerning taxation. It seems reasonable to expect, however, that the whole subject will receive meticulous, comprehensive and specialized study. The writer's personal views, particularly with respect to taxation on individual income, are inserted here, not purporting to be dogmatic pronouncements concerning what should or should not be done about taxes, but rather as the sincere opinion of one individual.

Individual income taxes are expected to produce approximately

$930,000,000/

$930,000,000 in 1943-44. To maintain these taxes at current rates might thwart incentive, ambition and industry of the individual, and might also discourage immigration and permanent settlement in Canada. Furthermore, if individual income taxes in Canada were substantially higher than in the United States, it might be extremely difficult to reconcile salary and wage scales and similar economic standards in the two countries.

Direct taxation in accordance with 'capacity to pay' is generally conceded an equitable principle. There are strong reasons, however, to support the view that the "size" of an individual's money income per se is not an equitable measure of that individual's capacity to pay. The inadequacies and injustices of this income measure become apparent and serious when taxes absorb a significant portion of an individual's income, particularly in the lower and middle-class income groups.

For some individuals, money income alone may represent their total economic and financial remuneration, whereas for others money income may be supplemented by 'income in kind', such as hidden salary in the form of pension benefits, et cetera. Meticulous adjustments must be applied to the hierarchy of forms which equivalent income can assume, if high taxes on an individual's money income are to be equitably assessed. Without such meticulous adjustments the democratic basis of society would appear to be impaired, and individual thrift to achieve economic independence and security would appear to be discouraged.

As one specific illustration of this contention, employment for many people (e.g., civil servants and others whose employers have instituted contributory pension funds) carries generous benefits for their own retirement, or, in event of death, provision for their dependents. Persons whose employment carries no such benefits must necessarily make their own pension or insurance provisions through payments from their own incomes; yet the latter are granted no tax concession whatsoever to compensate for the pension or 'income in kind' which the former receive by virtue of their employment.

As another illustration, a skilled or professional worker often borrows money and thereby mortgages his future in order to educate, train or equip himself for more responsible work. Other things being equal, the financial backlog acquired for this commendable purpose implies that his current capacity to pay is less than that of another person without a similar backlog, even though the dollar value of their taxable incomes may be precisely the same. Unless taxation measures leave ample room for encouragement of such individual ambition and effort, mediocrity and less responsible work would appear to be economically preferable.

As a third illustration, many people, in addition to their dollar salary, receive board or accommodation or expense accounts, while others must cover these costs from their own salaries. Present tax measures do not effect realistic adjustments for this differential, in very many cases.

Briefly, terms of remuneration and past, present and future financial obligations assume so many different forms and exhibit such marked differences between individuals, that the size of an individual's money income, as currently assessed, does not seem to be an equitable post-war basis upon which to calculate his capacity to pay high taxes on that money income. When taxes are at high levels inequalities and disparities must be carefully adjusted; when taxes are at comparatively low levels, such adjustments are not of cardinal significance.

Corporation taxes. With respect to corporation income and excess profits taxes, the fullest possible understanding and co-operation between business and government would appear to be advisable. Upon the assumption that profitable business operations are essential to Canada's economic solidarity and progress, definite tax revisions might greatly assist in the maintenance of full employment, adequate wages and that share of the 'real' national income attributable to industry.

Sales/

Sales taxes. While sales taxes are less direct than taxes upon income, they relate more to individual capacity to pay if they are confined to luxury and non-essential articles.

Succession Duties. Succession duties appear to provide one of the most logical ways to produce gradual redistribution of wealth and to correlate an individual's income with his own ability and effort. However, inheritance of money is a subject which is too controversial and too complicated for discussion here.

With respect to all post-war taxation and income controls clearly defined government policies might prove very helpful, particularly if these were announced just as soon as possible. Uncertainty concerning taxes seems inimical to individual and business incentive and might retard that confidence in the future which seems so necessary for economic progress after the war.

5. Government Loans

Government loans could be floated successfully for reconstruction purposes, if based upon carefully designed and practical plans. It is very important to secure public confidence in the way public money will be spent, and to have utmost co-operation between government and business. The fear of bureaucratic and pervasive government control should be recognized and allayed. Practical demonstrations of economical and efficient government spending and really constructive plans will receive public support.

6. Industrial Plant Conversion

At the close of the Great War, Canada had acquired much industrial experience and growth. It is possible that efforts and policies designed to re-establish agriculture in its pre-war commanding position may have been effected at the expense of potential industrial development. United States capital, which was steadily providing the main accretion to external investment in Canadian industry, may have tended to retard basic industrial development. Through encouragement of manufacturing operations in Canada, which dealt only with partial production from raw materials to the finished product, there was assured expansion for United States imports of parts and partly finished goods. Consequently, a more integrated Canadian industrial development might conceivably have been promoted through vigorous domestic investment, and a more independent industrial economy might have been evolved. In this event, British capital might have moderately increased and Canada's industrial market in the United Kingdom and Europe thereby enlarged.

Plans for reconversion of plants and industrial employment after the last war seem indefinite; such plans after this war should be as practical and comprehensive as possible.

Co-operative discussions between management and workers, introduction of shorter working hours and more frequent shifts in munitions plants being converted to peacetime operations, subsidized companies' payrolls from public funds where necessary, expansion of new industries; these along with many other factors are involved in maintenance of industrial employment.

7. Training and Re-employment

Recommendations on training and placement policies required in the post-war period have already been made by the Committee on Reconstruction's Sub-committee on Post-War Employment Opportunities. They are cited in Appendix IV. of Dr. Leonard C. Marsh's "Report on Social Security for Canada." It is worthy of emphasis, however, that vocational training for younger people as well as courses should be extended in scope and in duration. Choice of work would then be more diversified; also the impact on the employment market/

market would be retarded and more evenly spread over a wider field for a longer period of time. Comprehensive educational and technical programmes to cover various forms of skilled and unskilled labour need to be devised, even if government expenditure were involved.

Experience would suggest that if it is at all feasible, there is much to be gained from a less hasty demobilization and repatriation of men from the Services than was the case after the Great War. There would presumably be initial emphasis on those whose jobs are being retained for them; and simultaneously, present temporary incumbents of these jobs should be directed into other channels. It is to be expected also that schools and universities should be organized in advance through both academic and financial arrangements to enable qualified returned men to complete university training. Provisions made in this direction are already for more advanced than they were in 1918. But one caution is outstanding. The size, proportion, and range of both the military and civil population in need of occupational readjustment after the war are beyond all comparison this time. A correspondingly greater effort of organization will therefore be called for if a transition without serious unemployment is to be achieved.

ADVISORY
COMMITTEE ON RECONSTRUCTION

SEQUENCE AND TIMING OF ECONOMIC EVENTS IN THE LAST WAR AND PORTWAR PERIOD, 1914-1923

1(b). Analytical Report

by

Professor B. H. Higgins

McGill University

Montreal, 1943.

This study was prepared for the use of the Advisory Committee on Reconstruction. The views expressed are those of the author and do not necessarily carry the approval of the Advisory Committee on Reconstruction or its Subcommittees.

A descriptive report on the same subject by Dr. Alice W. Turner of Toronto is also available.

List of Tables in the Text

INTRODUCTION

Our economy at war's end might be likened to a blindfold acrobat walking a very thin wire labelled"economic stability". Far below on one side, yawns the abyss of "depression", on the other roars the volcano of "inflation". With nervous caution the acrobat manipulates a long pole with heavy weights at each end, one labelled "employment" and the other "purchasing power". On the platform towards which he inches his perilous way sit the "framers of economic policy", shouting instructions in a frantic endeavour to keep him balanced. If they let him lower "employment" too far, he will surely fall into the abyss; while if they allow him to give undue weight to "purchasing power", he will just as certainly topple into the volcano.

We are all of us very much concerned in keeping our acrobatic economy balanced on his precarious perch, and we all share the responsibility of giving him proper directions. For each of us not just the professional economist, financier, government official, or legislator, but every voter - - is a framer of economic policy. The opinion of the electorate is at the root of all policy in a democracy. The legislature must translate the wishes of the people into basic principles for action. The government official must administer these policies in accordance with principles laid down. The "expert" can only offer advice and point out cause and effect relationships at each stage. Any knowledge that can be obtained as to the probable nature of the postwar problem and possible solutions to it is of the utmost importance to everyone.

It is for this reason that we have studied Canadian experience during and after the last war. For then the acrobat ventured out on his unsteady journey inadequately coached, and very largely unaware of the dangers that lay before him, - despite being singed by the inflationary volcano during the war itself. When the Armistice was signed, he leaned dangerously towards the abyss, regained his balance only to incline too far the other way and pitch headlong into the volcano. He emerged severely scorched, and in his weakened state promptly fainted into the abyss. By some miracle he bounced back on to the wire, and during the twenties maintained an appearance of competence in his difficult task. Actually, his knees were gradually giving out, and in 1929 he plunged into the abyss once more. He recovered slowly and painfully during the thirties, but it took a strong draught of "major War" to restore his wonted vigour.

This time the abyss is deeper, the flames hotter. If after this war as after the last one, the instructions given to our artist prove too little or too late, he may fall one side or the other never to rise again. He may be supplanted by a new kind of economic system which seems to some better suited to the arduous feat which is required of it, but which others of us may dislike intensely. It is worth while, then, to re-examine the experience of this country during and after the last war, in an effort to discover to what extent postwar difficulties can be traced to reappearance of problems disguised by the war, to wartime mismanagement, to wartime dislocations, to international complications, and to problems arising and policies adopted only after the war was over.

The materials on which this study is based are the comprehensive charts of the 1914-1923 economic situation in Canada prepared by the Committee on Reconstruction, and reported on by Dr. Alice W. Turner in a complementary document. Advantage was also taken of various subsidiary statistics assembled by Mr. F. H. Leacy of the Committee's staff.

CONTENTS

I. The Pattern of Economic Fluctuations During and After Major Wars.

Can we really learn anything useful from the economic history of a war fought a generation ago, when things were so different? Would not our time and energy be better spent in studying our current situation and making "guesstimates" as to how things will develop out of it?

True, there are marked differences between the two war periods. Unquestionably, we should examine current developments with the utmost care. However, we need to know just how this war differs from the last one, and for that knowledge we must study the history of War I as well as War II. Moreover, as we shall see, there are significant similarities between the two wars as well as disparities. In recognition of this fact, careful studies have been made recently of British and American experience from 1913 to 1923, some confidential and some published.[1/] Until recently no comprehensive study has been undertaken for Canada. Several excellent studies of special aspects of the subject have indeed been published. [2/] However, the statistical data now available are better than those which previous writers were able to use, and more has been secured for the purpose: it is possible accordingly to make a synthesized sequence study of a sort which has not hitherto been attempted. Such a study is useful, not merely as a guide to Canadian internal policy, but also as material for consideration in connection with international policy involving Canada, and as additional light on the common problem of all the United Nations. For the pattern of economic developments during and after wars shows an extraordinary disregard for times and places. The brief notes on British and American experience which follow show that while there are differences from time to time and from country to country that must not be overlooked, the similarities are so striking as to take on almost the appearance of a "law".

---

(1) Economic Fluctuations in the United States and the United Kingdom, League of Nations, 1942; Collapse or Boom at the End of the War? Brookings Institute, 1942; the "Our Economy at War" series, National Bureau of Economic Research, Nuffield College (England): The Boom of 1919-21 (Confidential Memorandum No. 5); memoranda on the period in U.S., from the National Resources Planning Board (Washington, D.C.).

(2) For example: J.J. Deutsch, "War Finance and the Canadian Economy, 1914-1920", Canadian Journal of Economics and Political Science. (henceforth C.J.E.) November 1940; F.H. Brown, "The History of Canadian War Finance 1914-20", in War Finance in Canada, Toronto 1940; C.A. Curtis, "The Canadian Banks and War Finance", Contributions to Canadian Economics, Vol III, 1931; F.A.Knox, "Canadian War Finance and the Balance of Payments", C.J.E. May 1940; Royal Commission on Dominion-Provincial Relations, Reports, Vol.1, Ch's 4, 5.
F. H. Underhill, "Canada and the Last War", in Canada in Peace and War, edited by Chester Martin, Canadian Institute for International Affairs, Toronto 1941; W. C. Clark, "Business Cycles and the Depression of 1920-21", Bulletins of the Department of History and Political and Economic Science No. 40, Queen's University, August 1921; O.D. Skelton, "Canadian Federal Finance, Parts I and II", ibid., numbers 16 and 29, July 1915 and October 1918; J. S. Prentice, "Canadian Federal Finance", ibid number 55, March 1928; Direct and Indirect Costs of the Great World War, Carnegie Endowment for International Peace, 1919, pp. 43-52.

The Napoleonic War Period

Economic history during and after the Napoleonic Wars bears a resemblance to experience during and after the first World War that is almost uncanny. The war period itself was characterised by inflationary war finance, a tremendous growth of national debt, soaring prices, intensified industrial activity, ploughing up of pasture lands to grow grain. Reminiscent of England rather than the United States in the last war, England departed from the gold standard soon after the Napoleonic Wars began. After Waterloo, there were several months of uncertainty and stagnation, but in 1817 recovery set in and 1818 was a year of renewed price rise, easy money, and industrial prosperity. Prices dropped sharply in 1819, and the following year was one of general depression. Good harvests, the strong bullion position of the Bank of England, low interest rates, and continued banknote expansion soon reversed the trend, and the period of 1822-1825 was one of speculative, inflationary boom. As during the late twenties, the stock market soared, with "buying on margin" conspicuous consumption of paper profits, and fraudulent dealings rampant. As during the twenties, too, the stock market boom hid from public view both the large investments in heavy industry (canals, railways, mines, steamships, construction) which was the real basis of the boom, and the deep underlying maladjustment in agriculture. 1/ These became apparent only after credit stringency and numerous bank failures had precipitated a panic and collapse - leaving agriculture prostrate and many investment projects unfinished. The financial panic itself was short-lived; but the depression, while alleviated by short periods of incomplete recovery, as from 1833 to 1837, lasted until 1850.

The United States was in active combat during only two of the Napoleonic War years. Nevertheless, American prices rose some 50 per cent from 1812 to 1814, specie payments were suspended, the national debt rose enormously, and banknote circulation increased to the point where the people lost confidence in it. Government bonds depreciated until they yielded 7½ per cent in 1814. Despite tight money, financial instability, and depression in the agricultural South, a speculative boom developed after the war which carried manufacturing activity and prices to new heights. A precipitous collapse ensued in 1815, prices dropping well below their prewar level. Curiously enough, the consequent depression in manufacturing was attended by agricultural recovery and general improvement in the South; at this point American post-Napoleonic war history departs from the usual pattern. The years 1817-18 were marked by mild recovery, and were followed by depression in 1819. From 1821 to 1825 there was a new speculative boom, accompanied by financial, industrial and agricultural expansion. As in England, the crash in 1825 was attended by tight money, bank failures, and stock market collapse. As in England, the entire period from 1825 to 1850 was one of sporadic, limited prosperity and frequent depression, despite significant developments in canals and railways, iron and steel, waterpower and textiles.

The American Civil War

The economic history of the "war between the States" is complicated by two factors which are not part of the usual picture: physical devastation and destruction of the economic and social organization in the South, which was part of the same political unit as the victorious North; and the printing of currency with no backing other than government fiat. However, the general outlines follow the standard model. Prices more than doubled during the war, business

---

1/ On the agricultural aspects of the comparison of the Napoleonic and World War periods, see Benjamin Higgins, "Agriculture and War", Agricultural History, January 1940.

activity was keen although its composition changed. The public debt of the North rose from $75 million to $2,600 million. Prosperity, which seems to have been based very largely on consumer spending, continued for a year and a half after the war, and was followed by mild depression in trade during 1867-68. Industrial expansion, led by railroad construction, was evident throughout the whole postwar period. The period 1869-73 was a boom. Once the bubble broke, it gave way to twenty-three years of chronic and severe unemployment and inactivity, occasionally interrupted by incomplete recovery. Until 1930, this period was known as "the great depression", and it is a close rival of the thirties for the right to this title. 1/

World War I: England

England financed the first world war by monetary expansion and public borrowing, especially in the form of Ways and Means advances by the Bank of England. Prices rose 150 per cent, agriculture as well as industry expanded to meet wartime demands. The Armistice was followed by a light recession, during which policy considerations were complicated by a simultaneous desire to promote a boom to absorb men from war industry and the armed forces, and to bring about a fall in the extremely burdensome cost of living. Prices fell slightly, but union employment did not fall below 97 per cent in this "breathing spell", and unemployment in all insured industries did not rise much above 10 per cent, despite a very rapid demobilization. By March of 1919, two million men had been demobilized, and in April 85 per cent of them had been absorbed into civilian employment. Although inflationary public financing had not ended, wartime restrictions on credit, trade, and industry were removed, in response to pressure from the business community. De-rationing of food, rent and fuel, came more slowly.

Towards the end of 1919, prices began to climb again, and rose much more rapidly than during the war itself, reaching a peak nearly 3 1/2 times the prewarlevel before the downturn in 1920. Although industry was hampered by a shortage of skilled labour and a fall in productivity per shift and per man-hour, 1919 and 1920 were boom years. Employment was uneven, however, with unemployment as high as 10 per cent in shipbuilding, engineering industries, and iron foundries in December 1919. The price rise was accentuated by speculation in inventories and accumulation of stocks. The stock market was definitely bullish. The value of new issues rose 80 per cent from 1919 to 1920, and speculators spent paper profits freely, Imports of consumer goods increased heavily. Exports rose more sharply than production, but remained below the 1913 level. Public expenditures continued on a high level, and the deficit for 1919 was £ 580 million. 2/

Expenditures by local authorities on public housing projects contributed to the expansion. There seems to have been a "backlog" of demand for both consumers' and producers' goods. Civilian consumption per capita had fallen 20-25 per cent during the war, shipping tonnage was well below the 1914 level, the railways had lost rolling stock and equipment in France, and industry as a whole was nearly a year behind in its replacement. Shipbuilding was maintained 30 per cent above the prewar level. Iron and steel and engineering also operated close to capacity.

Credit stringency precipitated the downturn early in 1920. Reserve ratios of the banks fell below the accustomed 10 per cent, the bank rate was raised from 5 per cent to 6 per cent in November 1919

---

(1) Cf. W.W.Rostow, "Explanations of the 'Great Depression' 1873-96", Economic History Feb. 1940, and "Investment and the Great Depression" Economic History Review, May 1938.

(2) The deficit in fiscal 1920 was £ 326 million, nearly 6 per cent of national income.

and to 7 per cent in April 1920. Government expenditures were reduced, and a surplus of £ 149 million was obtained in 1920. Shipbuilding fell off sharply; while 2,403,000 tons were started in 1919 and 2,397,000 tons in 1920, only 568,000 tons were started in 1921. Prices dropped to half their peak level, production and exports did the same. The depression was aggravated by the inflation of land value and gross overcapitalization of many firms during the boom.

Recovery set in about the middle of 1922, and continued throughout the early twenties. Due to the return to gold at an overvalued rate, however, and perhaps to deeper causes, England had no real boom in the late twenties. On the other hand, her recovery from the depression of the thirties started earlier and was somewhat more complete than was the case with the United States or Canada.

World War I: the United States

Had not war broken out in August of 1914, it is quite possible that the United States would have suffered a prolonged depression during the decade that followed, instead of in the thirties. As it was, the initial effect of the war was to add financial panic to a depression already severe. With the growth of Allied demands for war materials, however, recovery set in. By 1916 a vigorous prosperity was under way. In 1917, and particularly after the American entry into the war in April, prices began an upward flight which did not end until the index of wholesale prices had more than doubled. Heavy government borrowing and monetary expansion supported an inflationary war boom.

The five months following the Armistice constituted a period of hesitancy. Industrial production fell about 10 per cent, wholesale prices about 5 per cent. By April 1919 it seemed clear that no collapse was imminent, and uncertainty gave way to optimism. Prices rose faster than ever, 36 points from March to May. Production and employment recouped their losses. Stock market speculation was rife. The boom lasted about a year.

Several factors contributed to this postwar boom. First, government deficit spending continued on a high level, despite all efforts to cancel war contracts as quickly as possible. The deficit for 1919 was well below the 1918 level, but only slightly below the 1917 level, and for the first three quarters was well above the 1917 level. Not until the fourth quarter of 1919 was a surplus shown. Second, monetary expansion was greater during 1919 than in any year of the war. Deposits, loans and discounts, and investments all increased much more during 1919 than in the previous year. The Federal Reserve rediscount rate was kept constant from the middle of 1918 to November, 1919. Third, U.S. Treasury advances to foreign governments for purchases in the United States continued at a high level, which helped to maintain exports. Fourth, gross investment in plant and equipment proceeded at a rate which until the present war period was without parallel. 1/ It must be remembered, however, that the capital goods industries depend more upon new construction for their market than upon replacement. Fifth, there may have been some backlog of consumer demand, especially in housing. Sixth, there was speculation in inventories, land, and securities which provided a facade of prosperity and promoted a generally bullish attitude. Seventh, wartime price controls were quickly removed.

---

(1) Cf. Paul Samulson. "Full Employment after the War" in Post War Economic Problems, ed. Seymour Harris, New York, 1943.

It seemed clear that continuation of such a boom, which brought no real prosperity and threatened to disrupt the entire economy, could not be countenanced by the fiscal authorities. Early in 1920 the Federal Reserve System set out deliberately to check monetary expansion. Rediscount rates were raised, bank lending curtailed. Government surpluses added to the deflationary forces. With the re-opening of customary trade channels and cessation of extension of foreign credits by the Treasury, American exports fell off. Once it seemed that the price rise would not be permitted to continue, commodity and security markets became bearish and prices collapsed.

The rest of the story is well known. The depression was severe but short, and gave way to the boom of the twenties, in which industrial expansion and renewed stock market speculation, both financed by credit extension, were dominant features. In 1929 came a new crisis, which was aggravated by financial difficulties throughout most of the world in 1930 and 1931. Recovery set in during 1933, lasted until 1937, but left a large heritage of unemployment and agricultural depression. Not until war broke out again did the American economy come close to full use of its resources.

Conclusions

We see, therefore, a certain order in the sequence of events during and after major wars. War periods themselves give at least an appearance of prosperity, with employment and production at high levels. Consumer goods become scarce relative to the monetary demand for them, usually more because of monetary expansion than of reduced supplies of goods. Prices accordingly rise. The war is followed immediately by a sort of "breathing spell" in which business men, investors, and people generally have a "wait and see" outlook. This period of hesitancy is usually one of mild recession which could, but apparently does not, lead to serious depression at once. It should be pointed out, however, that former wars have never attained the economic scale of this one, and the possibility of immediate and deep depression in the absence of correct policy cannot be dismissed too easily. The "breathing spell" is followed by a postwar boom, in which continued and even accelerated inflation is a frequent feature. Then comes a sharp, but usually short, postwar depression. After that there are a few years of considerable prosperity, followed by a long period of stagnation.

Canadian experience since 1913 is no exception to the general rule. However, it is not enough to state the existence of this conformity. We want to discover the causal sequence involved, in order to have some clues as to how this pattern might be prevented from recurring still another time. We want neither postwar recession, nor postwar inflation, nor postwar depression. If we succeed in avoiding these, we may be able to avoid the post-postwar depression which has hitherto followed the post-postwar boom, and which in many respects is the most serious danger to be faced in the whole decade after the Armistice. There is an aura of universalism about postwar experience which almost, we have said, suggests a "law"; but we do not mean that the pattern is inevitable. There may well be "laws" implicit in the common causal sequence; if we knew these laws, we could use them to obtain the objective of postwar economic policy; maintenance of national income and employment at a high and stable level, while the content of national income is being changed from things that win wars to things that produce welfare.

II. Canada in the War of 1914-18.

In 1913, Canada reached the end of an investment boom based on foreign capital. Nearly one-quarter of total employment was in the capital goods industries, about one half of total investment in the country was owned by outsiders. In that year alone, capital imports exceeded half a billion dollars, almost one quarter of the national income. An era of expansion, marked by opening of the West, birth of new towns and cities and growth of old ones, road and railroad construction, provision of agricultural machinery and equipment, development of new mines, was over.

Had not the war come along in 1914, it is hard to say how deep the depression might have become or how long it might have lasted. As it was, the national income fell from $2,359 million in 1913 to $2,253 million in 1914, and even in 1915 it was still slightly below the prewar level. 1/ When war broke out, excess capacity and unemployment prevailed. The initial effect of declaration of war was to dry up the inflow of capital, disrupt international trade, create an aura of uncertainty and fear, and thus intensify the depression.

Canada's long-run outlook in 1914 required a shift from capital importation and expansion to production of an export surplus to meet her foreign debt service. It was inevitable that Canada's participation in the Allied war effort should involve just such a shift from investment in fixed capital to production for export. While the form of the export surplus would be somewhat different in war than in peace, nevertheless this general compatibility of long-run and war-time demands on the Canadian economy should have eased the transition to war production. Taking this fact in conjunction with the existence in 1914 of wide-spread unemployment and excess capacity, it would appear that Canada was in a position very favourable for the development of a large-scale war effort. No such large-scale effort was forthcoming.

The Military Effort

In the military sphere, Canada has just cause for pride in her war effort. The outbreak of war found Canada completely unprepared for a military effort on even the most miniscule scale. She had no navy worthy of the name, no air force whatever, a permanent force of only 3,000 men, and a non-permanent and highly inactive "Active Militia" of some 75,000 more. Yet before the end of 1914, Canada has already sent 30,000 men overseas. Total enlistment reached 91,000 men in that year, and grew to 215,000 by the end of 1915. By the time conscription was introduced in October 1917, voluntary enlistments numbered 438,806 men. While the Canadian Air Force was organized too late for action, over 8,000 Canadians entered the Royal Air Force, and a separate Canadian tank corps was organized. The splendid record of the Canadian armed forces in combat is too well known to require comment here.

The Production Effort

On the production front, the story is less glorious. Whereas war expenditures at the present time are running close to 50 per cent of national income, war expenditures both at home and abroad reached 10 per cent of national income only in the last year of the first world war. Even when British expenditures in Canada through the Imperial Munitions Board are added in, war outlays in Canada never reached 20 per cent of national income. While reliable figures of total production are not available, it would appear that it did not increase more than 10 per cent over the war period. 2/ In this war, industrial production has already increased by 160 per cent.

---

(1) National income figures are from Deutsch, op.cit.

(2) Cf. Brown, op. cit. p. 25.

There were, of course, certain fields in which production expanded enormously. Outstanding among these is the munitions industry. Before the war, there was no munitions industry in Canada at all. Shortly after war was declared, a Shell Committee was organized, composed of representatives of the Canadian iron and steel industry and of the government. Three thousand shells were shipped to England before the end of 1914; in the following year over five million shells were shipped. In November of 1915 control of shell production was taken over by the Imperial Munitions Board. Shell shipments rose to twenty million in 1916 and twenty-four million in 1917. In the last two years of the war, the Imperial Munitions Board was spending more money in Canada than the Canadian government itself. Some 675 factories were in operation, and in 1917 between one quarter and one-third of the shells fired on the Western front were of Canadian manufacture. 1/

Significant increases were obtained in the production of certain foodstuffs, especially wheat and flour and meat products. Wheat acreage expanded 54 per cent during the war. Both hog and cattle slaughtering rose markedly. Production of cotton goods seems to have made definite gains. Physical production of copper rose 54 per cent from 1913 to 1918, lead 36 per cent, and nickel 86 per cent, while zinc production increased from negligible amounts to 35 million pounds. Production in other branches of industry, however, seems to have done little more than recover the losses of 1914. Employment went up in war manufacturing food production, transportation and trade, went down in construction, railways and railway equipment. On the whole, the effect of the war effort upon production and employment seems to have been to restore them to the 1913 level, and the only "shifts" of importance seem to have been into munitions and the armed forces themselves. The scanty figures available suggest some shift into steel production and shipbuilding, but not of large proportions.

The Export Front

Canada's chief contribution on the economic front was a substantial increase in exports to Great Britain. In the last two years of war over 40 per cent of the net value of manufactured goods was exported, as compared to 6 per cent or 7 per cent in the pre-war years. Munitions exports alone amounted to nearly one third of net manufactures.

Table 1. Canadian Trade Balance, 1914 and 1918
(In millions)

Year	Total			U.S.A.			U.K.		
	Imp.	Exp.	Bal.	Imp.	Exp.	Bal.	Imp.	Exp.	Bal.
1914	$619	$455	$-164	$396	$177	$-219	$132	$232	$100
1918	963	1,586	623	792	441	-351	81	861	786

Source: Trade of Canada

The value of $787 million increase in active balance would be about $400 million in 1914 prices, approximately 25 per cent of the value of physical production in 1914. This increase in export surplus was greater in value terms during the first war than it has been so far (end of 1942) in this one, and slightly bigger even in physical terms.

The composition of the increase in exports naturally bears a close relationship to the increase in production. Significant developments in agricultural exports are shown in Table 2.

(1) On Canada's military effort and munitions production, see F. H. Underhill, op. cit.

Table 2. Canadian Agricultural Exports, 1915-1919.
(All figures in millions)

Fiscal Year Ended Mar. 31	Total Agricultural & Animal Produce	Wheat		Wheat Flour		Butter & Cheese		Bacon & Hams	
		bu.		bbls.		lbs.		lbs.	
1915	$209.1	71.9	$74.2	4.9	$24.6	140.3	$19.8	94.8	$14.5
1916	352.5	157.7	172.9	6.4	35.8	172.4	27.7	153.6	27.1
1917	501.2	189.6	244.4	7.4	47.5	188.7	39.2	211.6	43.8
1918	740.5	150.4	366.3	9.9	95.9	174.4	38.6	207.8	60.1
1919	469.7	41.8	97.0	9.2	99.9	165.9	41.3	124.7	41.5

Much greater relative increases are shown in the field of manufacturing, and especially in the field of munitions, as Table 3 shows.

Table 3. Principal Manufactured Exports, 1915-1919
(All figures in Millions)

Fiscal Year Ended Mar. 31	Total Exports Manuf. Goods	Cartridges, Guns Rifles, etc.	Explosives and Fulminates	Newsprint		Woodpulp (Chemical and Mechanical)	
				tons		cwt.	
1915	$85.5	$ 0.2	$ 0.3	7.3	$14.1	8.6	$ 9.3
1916	242.0	73.9	7.1	9.3	18.0	8.1	10.4
1917	477.4	240.3	40.9	10.8	23.6	11.4	20.4
1918	636.6	351.3	35.0	12.1	34.0	9.7	25.6
1919	555.4	213.4	37.5	13.2	40.7	11.8	34.7

From Debtor to Creditor

Canada entered the war as a debtor nation, and for a short while continued to rely upon foreign loans to finance her war effort. As Sir Thomas puts it, "During the first months of the war our principal outlay was in England and it was met from the proceeds of a loan from the British Government. For the period from September to the end of March 1915, we arranged with the British Treasury for advances aggregating twelve million pounds sterling. We were leaning upon the British Treasury, not only for our war expenditure in England, but also in Canada, and for part of our public works and railway expenditure as well". 1/

As the war progressed, however, British purchases of Canadian munitions and supplies reversed the situation and Canada became a creditor country despite borrowing in New York.

Credit relations between Canada and Great Britain in the latter years of the war and in the immediate postwar years are summarized in the following table:

---

(1) Op. cit. pp.13,17 Canada also sold £ 3,000 in Treasury bills and $ 5,500 of 1940/60 Dominion Stock at 4 per cent in the London market during this period.

Table 4. Canadian War Advances to Britain, 1917-1924
(In millions)

Fiscal Year	Advanced to Great Britain	Advanced by Great Britain	Balance due to Canada
1917	171.8	180.9	-11.3
1918	504.6	392.9	111.7
1919	474.7	253.2	221.5
1920	.....	58.4	171.2
1921	.....	29.8	141.4
1922	.....	18.7	122.7
1923	.....	56.2	66.5
1924	.....	66.5	.03

Source: Sessional Papers of Canada, Public Accounts
(Quoted by Curtis, op. cit. p. 23)

The first New York issue was floated in July of 1915, through J.P. Morgan, and consisted of one and two year notes bearing 5 per cent interest sold at par and at 99 1/2 respectively. The finance Minister had some trepidation about this new step.

"We had thought of this at an earlier date, but it was not clear that either the Government or public opinion in the United States would favour a public offering there by one of the belligerent nations" (1)

The loan was very succesful, although there was some criticism that the rates were too high. Financial opinion was, however, that given the American doubts as to the outcome of the war, the flotation by the Canadian government of $45 millions in short term notes in New York was something of an achievement. (2)

The success of this move led to its repetition. In March of 1916, $75 millions were raised in New York on 5, 10 and 15 year 5 per cent loans sold at 99.56, 97.13 and 94.94 respectively. In 1918 $100 millions in 5 per cent two year notes issued at par were sold in New York.

Thus during the last war, as in this one, Canada became a creditor country. Canada's reversed financial relation to Great Britain, and the development of an American market for Canadian securities, were among the major financial events of the first world war.

Inflation

With the war effort on so much smaller a scale last time, one might expect that the degree of inflation would also be less. Just the reverse is the case. Whereas in this war prices were permitted to rise only 20 per cent in the first two years and have been kept stable since, in the last war prices doubled. Even the distortion of the price-income structure was somewhat greater in the last war. This time wholesale prices have risen only slightly more than retail prices, and retail prices only slightly more than cost of living. The biggest discrepancy has been between prices of foods and raw materials, (many of which do not come under the ceiling) which have risen over 30 per cent, and prices of manufactured goods (most of which are under ceiling regulations) which have risen less than 20 per cent.

(1) Op. cit. p. 19
(2) Cf. Brown, op. cit. p. 11

There are, however, more serious distortors hidden behind the general indices. Prices of non-ferrous metals and non-metallic minerals have gained less than the general average, while prices of animal and vegetable products have risen considerably more than the average. Building materials prices have gone up more than manufacturers' materials prices. Prices of animal products have shot up twice as fast as prices of field products. The contrasts are even more striking when prices of particular commodities are examined. 1/

These discrepancies in price movements carry with them differences in the effect of war upon incomes. There are significant variations in wages according to occupations. The index of hourly rates shows increases varying from 7 points for printing trades and 8½ points for building trades to 17 points for metal mining and 16½ points for factory labour. Finer breakdowns show even wider disparities.

One might expect that the price distortion in the last war, when nearly all prices were left free to soar at will and the general increase was so much greater, would be less than in this one. Such was not the case. Wholesale prices rose 99 per cent, cost of living rose 49 per cent. Fibres and textile materials rose 170 per cent, vegetable products 120 per cent, iron and its products 127 per cent. Chemicals on the other hand, increased only 87 per cent, animal and their products only 79 per cent, non-metallic minerals and products only 45 per cent, non-ferrous metals and products only 44 per cent, wood and wood products only 39 per cent. In this war, prices of producers' and consumers' goods have moved more or less together; in the last war consumers' goods went up only 73 per cent while prices of producers' goods went up 96 per cent. Moreover, whereas foods, beverages, and tobacco rose 92 1/2 per cent, other consumers' goods rose only 48 per cent. Manufacturers materials rose 113 per cent, compared to a rise of 50 per cent for construction materials and 49 per cent for producers' equipment. Within the cost of living category itself, there were wide differences between the sub-groups, as Table 5 shows.

Table 5. Rise in Cost of Living, 1914 - 1918
(All data converted to base 1914-18 -- 100)

Retail prices	Aug. 1914	Nov. 1918	War Prices Increase
Cost of Living	84.9	131.2	54.5%
Food Items	82.6	145.2	75.8%
Rent	100.8	111.9	11.0%
Fuel	93.0	121.9	31.1%
Clothing	76.7	139.0	81.2%
Miscellaneous	90.4	123.1	36.7%

1/ Percentage rises were: Wheat, 89; Flour, 16; Hogs, 119; Steers, 88; Oats, 89; Pulp, 138; Wool, 73; Cheese, 55; Gasoline, 47; Raw Cotton, 100; Cotton Yarn, 16.

In contrast, prices of certain luxury goods fell.
Source: Monthly Review of Business Statistics, D.B.S.

As in the present war, still greater diversities of price movement appear when individual cases are cited. Prices of tin and linseed oil quadrupled, the price of wool went up some three-and-one-half fold, the price of wheat trebled before being pegged at a price about two and one-half times its prewar level. Yet steel prices increased only 25 per cent, and rubber prices actually declined. 1/

Wage movements show similar differences. Wages of common labour in steel and coal companies more than doubled, wages of steel workers and electrical machinists doubled, wages of skilled moulders went up 128 per cent, of blacksmiths', millwrights' and electricians' helpers only 62 per cent. Indices for various occupations are shown in Table 6.

Whereas in this war wage rates have risen slightly more than cost of living, in the last war wage rates in general lagged behind the cost of living. There was, however, considerable variation between the wage movements for different occupations, rates for skilled labour rising somewhat more than cost of living. Moreover, the increase in total employment enlarged the total wages bill. Despite the big increase in profits, therefore, 2/ it is not possible to say definitely that there was a redistribution of real income in favour of the upper income groups. Rather, middle income groups seem to have lost to both the upper and lower income groups.

Table 6. Index Numbers of Rates of Wages of Various Classes of Labour in Canada (Converted to base 1914 = 100)

Year	Building Trades	Metal Trades	Printing Trades	Steam Rlys	Coal Mining	Common Factory Labour	Logging and Saw Milling	Metal Mining	General Weighted Average
1914	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1915	100.7	101.1	101.1	99.8	100.5	100.0	94.1	101.3	100.7
1916	101.6	106.5	103.3	103.8	109.7	109.2	115.7	111.9	107.9
1917	109.0	127.4	108.6	122.1	128.5	127.9	137.6	124.1	122.6
1918	124.9	154.5	120.7	155.0	154.9	150.8	159.0	134.8	144.5

The average level of prices is simply the ratio of the flow of money (MV in the well-known Fisher equation) to the flow of goods (T in the Fisher equation). Inflation may result, therefore, from either a decline in the supply of goods in general or from an increase in the quantity of money or in its velocity of circulation. Since during the last war the export surplus increased somewhat more than did total production, the supply of goods available for domestic consumption may have shrunk a little. It seems clear, however, that there was no decline large enough to provide in itself an explanation of the

---

1/ On the other hand, War I prices of raw and partly manufactured goods stayed much closer to prices of fully and chiefly manufactured goods than has been the case in War II, except for articles of marine origin. Contrary to experience in this war, prices of manufactured goods rose more than prices of materials.

2/ The average rate of profit on 1914 capital of 46 leading mining and industrial concerns rose from 5.7 per cent in 1914 to 15.9 per cent in 1918 (Brown, op. cit. p. 16)

violent inflation which took place. 1/ We must, therefore, seek our explanation on the monetary side.

Monetary Expansion

Wartime inflation may take several forms. First, the government or the banks may print and circulate additional currency. Second, bank deposits may be expanded by bank lending to private individuals and private enterprise, whether for the purchase of government obligations or for other reasons. Third, bank deposits may be expanded by lending to government, either directly or by purchase of government obligations. Fourth, the velocity of circulation of money in existence may increase through a shift in ownership from people who tend to hold it idle to people who tend to spend it. All these forms of inflation occurred in Canada during the last war.

In the first days after the declaration of war by Germany the chief concern of bankers and of the Canadian finance minister was to avert financial panic. Already nervous about the recession that had set in, and about the imminent collapse of the real estate boom that had accompanied territorial expansion, Canadian financiers were thoroughly frightened by the prospect of European war. There were heavy withdrawals of gold from the banks, especially in the financial centers of Toronto and Montreal. Accordingly, the finance minister, Sir Thomas White, called to Ottawa the leading members of the Canadian Bankers' Association. Within a very few hours, proposals were drafted to remedy what Sir Thomas has called "the lack of legislation for the contingency of panic". 2/ These proposals were embodied in an Order in Council of the following day, and were as follows:-

1. The banks were empowered to suspend payment in gold, and to make payment in their own notes.

2. To provide for increased bank note circulation, the Department of Finance should make advances of Dominion notes to the banks against the pledge of securities deposited by the banks with the Department of Finance.

3. The "excess circulation" privilege, formerly restricted to the crop-moving period from September 1st, to February 28th, was to be extended to include the period from March 1st, to August 31st. Excess circulation was taxed at 5 per cent.

1/ Of course, the secondary effects of the great increase in export surplus(in economic parlance, "foreign trade multiplier effects") would tend to raise national income, and in the absence of an increase in output such a rise in income could only consist of a rise in prices. The operation of the foreign trade multiplier seems to be the kernel of truth in the "outside forces" explanation of inflation which was common at the time. However, the foreign trade multiplier could affect the domestic price level only by causing monetary expansion, and such expansion could have been prevented by proper monetary and fiscal policy. Recognition of the influence of the foreign trade multiplier on national income is not in itself an excuse for permitting internal inflation simply because the export surplus is increasing in value terms, as experience in War II demonstrates.

2/ Sir Thomas White, The Story of Canada's War Finance, 1921, p. 7. For another account of the financial situation in the first days of the war, see Ross, "A History of the Canadian Bank of Commerce" Toronto 1922, Vol. II, Ch. VI.

4. Redemption of Dominion notes should be suspended.

5. Authority to declare a moratorium was to be obtained.

These measures were all illegal at the time their utilization began, but they were given legal status by the Finance Act of 1914. The authority to declare a debt moratorium was also obtained, but never used.

Thus from the very outset of the war, the primary concern of the financial officers of the country was to provide "elasticity". The time honoured policy of meeting a panic by increasing the monetary circulation has found new support in the recent doctrines of Keynes and his followers; but the inflationary implications of this set of regulations are clear. Designed as an emergency measure to meet an incipient panic, the Finance Act of 1914 remained on the statutes until the the creation of the Bank of Canada in 1934. It gave authority for virtually unbridled inflation. As Professor Curtis has put it, "the banks apparently could expand without limit, as long as the discount rate was sufficient to make expansion profitable." 1/

The government lost no time in making use of its new inflationary powers. One of the very first financial measures of the war was the issue of $10 million in Dominion notes. Another $16 million was issued as a loan to the railways, against $20 million of railway bonds and debentures. The authorized issue against specie reserve was increased from $30 million to $50 million. In 1917 $50 million of Dominion notes were loaned to the British government against collateral deposited by the British Treasury in the London branch of the Bank of Montreal. Altogether $96 million of new Dominion notes were put into circulation. The great bulk of these notes found its way into the banks, raising bank reserves by about 30% and paving the way for credit extension. The course of monetary expansion is shown in Table 7.

Table 7. Measurements of Monetary Expansion, 1913-1920
(In millions)

	End of year							
	1913	1914	1915	1916	1917	1918	1919	1920
Currency	133	130	148	176	220	251	262	262
Bank Deposits	1,006	1,103	1,145	1,303	1,565	1,670	1,842	1,951
TOTAL	1,139	1,143	1,293	1,479	1785	1,921	2,104	2,213

Source: J.J. Deutsch, op. cit.

The bank reserve ratio rose from 18.9 per cent in 1914 to a peak of 25.7 per cent in 1916, and fell to 19.1 per cent in 1918. The maintenance of reserve ratios in face of a doubling of bank note circulation and a 70 per cent rise in bank deposits is clear indication of the government policy of providing the banks with ample reserves to meet whatever demands should be made on them. It was the official opinion that bank credit facilities "should be employed in meeting the requirements of the agricultural, commercial and industrial community for short loans" rather than for government finance. 2/ Nevertheless, the increase in bank holdings of securities, which can be assumed with reasonable safety to consist of government obligations, was nearly as great as the increase in loans, as Table 8 shows.

1/ Op. cit. p. 28.

2/ White, op. cit. p. 24.

Table 8. Expansion of Bank Assets, 1914-1918
(In millions)

Item	End of year				
	1914	1915	1916	1917	1918
(Govt. deposits)	$ 16.4	$ 24.1	$ 50.6	$103.0	$136.8
Securities	105.7	122.9	262.8	468.4	513.6
Loans, Canada	854.5	859.7	902.9	930.3	1,315.0
Loans elsewhere	128.4	195.6	250.3	246.1	119.1

Source: Canadian Annual Review 1918, p. 569

The Finance Minister, despite the liquidity of the money market, and his desire not to impose on the banks, was extremely nervous about trying to borrow from the public. The only domestic borrowing during 1914 consisted of a direct loan of $5 million from the Bank of Montreal. No public issue was floated until November of 1915. Sir Thomas has explained his hesitation as follows:-

"For many months it had been under consideration and was regarded as a somewhat doubtful experiment. No loan of even five million dollars had ever before been subscribed in Canada and a war issue of less than twenty-five millions would have been hardly worth while.

"The general Canadian public were not investors ... Large manufacturing and commercial concerns required all their liquid resources as working capital. The mass of the people did not know what a bond was. It seemed, therefore, that for the early stages of our war borrowing in Canada we should have to rely upon financial institutions, such as banks, insurance and trust and loan companies, and upon the comparatively small body of investors who had been accustomed to buy stocks and bonds for the investment of their money" 1/

A loan of $50 millions had been decided upon as necessary, but financial opinion was that $25 millions was all that could be expected in subscriptions. Accordingly, an agreement was made with the banks that they would accept an allotment of $25 millions, in proportion to their paid-up capital, with the provision that any public subscriptions in excess of $25 millions should be used to reduce the allotment to the banks.

To everyone's surprise, the loan was heavily oversubscribed. The government accepted $100 million, and returned $4 million of the banks' allotment. Encouraged by this success, the government borrowed on an ever increasing scale throughout the rest of the war. The operations are summarized in Table 9.

1/ Op. cit. pp. 22, 24.

Table 9. Canadian Government Borrowing in World War I

Fiscal Years	Date of War Loan	$ millions accepted	Subscribers (000)	Bank Subscriptions	Interest (Percent)	Maturity Years	Price $'s	Increase in Treas. Bills
1916	Nov. 1915	100	25	$25,000	5	10	97.5	100,000
1917	Sep. 1916	100	34	50,000	5	15	97.5	75,110
	Mar. 1917	150	41	60,000	5	20	96.0	---
1918	Nov. 1917	398	820	---	$5\frac{1}{2}$	5-10-20	100.0	73,820
1919	Oct. 1918	690	1,080	---	$5\frac{1}{2}$	5-15	100.0	---
	Mar. 1919	678	830	---	$5\frac{1}{2}$	5-10	100.0	---

Source: Curtis, op. cit.

The organization of the loan campaigns centered about a committee representing the five big banks and professional dealers in securities, but door to door canvassers were also used, and the cooperation of life insurance and trust companies, schools and churches, fraternal and other societies, etc., was enlisted. Each drive was supported by vigorous publicity in the Press. The banks received and handled subscriptions, receiving 0.5 per cent commissions for their services. No attempt seems to have been made to introduce payroll deductions for bond subscriptions, nor was any effort made to reach smaller incomes through savings certificates or stamps of small denominations. Insurance companies took over 10 per cent of the first two loans, and total subscriptions to the end of 1918 amounted to $94 million. Loan and Savings companies took $26 million, Trust Companies $15 million. Thus something over half the increase in debt was taken up by individuals and non-financial organizations.

The Finance Minister regarded the large returns from the last three loans, known as the Victory Loans, as "the greatest financial achievement of the War". There is some justification for this attitude. The per capita yield of the two Victory Loans of fiscal 1919 was about $170. compared to about $160 for the two Victory Loans of fiscal 1943. On the other hand, it must be remembered that in the first war the loans were made in a very easy money market, and the ratio of the number of subscribers to the population was less at its peak in the last war (about 1:8) than in this war (nearly 1:5). Similarly, whereas per capita borrowings in Canada compare favourably with the record of the United States in the last war, the ratio of subscribers to population reached much higher figures in the United States. 1/ It would seem that bond purchases were confined more strictly to the upper income groups, corporations, and institutions than in Canada this time or in the United States last time.

The government started the practice of selling Treasury bills to the banks at about the same time as it floated its first public loan. From that time on, this form of borrowing played an important role in government finance, and borrowing from the public was at least in part simply a process of refunding this short-term debt to the banks. A comparison of tables 8 and 9 shows that bank holdings of securities increased more than Treasury bills outstanding plus bank subscriptions to war loans, which suggests that the banks bought substantial amounts of war issues on the open market.

1/ Cf. Whittlesey, The Banking System and War Finance, National Bureau of Economic Research (Financial Research Program) 1943.

The highly inflationary nature of this whole process is readily apparent. Yet its importance as an explanation of the divergent experience in the two wars can be easily exaggerated. In fact, the rate of monetary expansion has been somewhat greater in this war than in the last one. From the end of August 1939 to the end of March 1943, the supply of money (note circulation plus deposits) increased 55 per cent; from the end of June 1914 to the end of June 1918, a roughly equivalent and indeed somewhat longer period, the quantity of money increased only 52 per cent. Moreover, whereas in the last war the banks took no more than a third of the total increase in debt during the war, up to the flotation of the Fourth Victory Loan in May 1943 the banks had absorbed close to 40 per cent of the increase in debt. Thus the failure to avoid inflation last time and the success in avoiding it this time is not due to any difference in the extent of total monetary expansion or in the degree of bank participation in loans to government.

Available figures of bank clearings indicate that they rose somewhat more than bank deposits during War I, indicating a rise in velocity of circulation of deposits. However, the same is true in War II, although the rise has been slight. The explanation is not to be found here.

There was no war savings campaign in the last war, and it may be that the availability of savings certificates and stamps has tapped sources of savings in low income groups which were left untouched in the last war. However, total sales of war savings certificates had reached only $24 millions by the close of fiscal 1943, redemptions were running at 34 per cent of sales, and cumulative redemptions were 16 per cent of certificates eligible for redemption. Clearly, the savings involved in the sales of certificates and stamps are of no real significance in reducing consumer demand and preventing inflation.

During the last war, the banks made substantial loans to customers to assist them in the purchase of war bonds. 1/ In this war, loans against securities have actually fallen off. When a man borrows from the bank the money to pay for a government bond, there is no need for him to reduce his spending, and the sale of the bond has no anti inflationary effect. Unquestionably, this difference in the effects of public subscriptions to war loans is part of the explanation of the striking contrast between price movements in the two periods. Yet the magnitude of such loans could not have been enough in itself to provide a complete explanation, and in any case deposits created under such loans are part of the total increase in money already noted.

No doubt the existence of a Central Bank in War II has assisted the Finance Ministry in exerting control over the banking system by affording a continuous relationship with the banks, and providing leadership in banking thought and policy. Yet the difference between monetary control with and without the Bank of Canada can easily be exaggerated, particularly if the policy of the Finance Department is so purely expansionary as it was in the last war. The Bankers' Association performed many of the functions of a Central Bank, its president serving as a sort of central bank Governor. 2/ The Bank of Montreal and the Royal Bank of Canada, with their widespread foreign branches, were able to play the role of a central bank in the international sphere.

1/ "As in previous years", Ross writes, "the bank announced its willingness to assist subscribers to take up their subscriptions within limits; loans must not exceed ninety percent of the amount of bonds subscribed for and must be paid within ten months, the rate of interest to be five and a half percent, the same as that yielded by the bonds." See also Curtis, op. cit.

2/ "I discovered when I was Minister of Finance that the Canadian Banking System is the most perfect instrument that a Minister of Finance could have at his hand in floating a loan... What had I to do? Just call up on the telephone the president of the Canadian Bankers' Association: 'I want all the branch banks of Canada notified to do a certain thing.' It was done."
Finance Minister Sir Thomas White in "Federal Administration and the Banks", Journal of the Canadian Bankers' Association (April 1922) vol. xxix, p. 358.

It would seem, therefore, that we must seek the explanation elsewhere than in the monetary field. There are two possible channels of investigation. First, why was the monetary expansion not offset by increased production to the same extent in the last war as in this one? Second, has the government been more successful in immobilizing the increase in money this time? These questions lead us to the examination of two aspects of government finance as yet unconsidered: direct controls and taxation.

Direct Controls

Direct controls played a small role in the financing of the first war. An Order in Council of 1916 forbade accumulation of "Unreasonable" stocks of goods and required hoarders to sell excess holdings at "just" prices. In 1917, the threat of a short wheat crop and famine prices led to the establishment of a Board of Grain Supervisors to co-operate with the Allied purchasing agency in rationing the available supply between the domestic and foreign markets. A food Control Office was set up in the same year. While its function was mainly investigatory, it did go so far as to ration certain commodities among processors and dealers. A Fuel Controller was appointed to worry about the new pressure upon the coal supply when the United States entered the war. Strikes and lockouts were prohibited. In 1918, rentals were brought under supervision.

Price fixing seems to have been more comprehensive in the immediate postwar years than during the war itself. The Food Board did fix the price of salmon, and in co operation with the Board of Grain Supervisors, established a fixed spread between the prices of wheat and flour. Orders in Council were issued fixing the price of newsprint and placing an upper limit on profits in the packing industry, above which profits were appropriated by the Government. After the Armistice, however, the Combine and Fair Prices Act gave to the Board of Commerce wide powers for investigating and regulating prices, and during 1919 and 1920 this Agency did fix prices of a considerable range of commodities.

In the financial sphere, the main item of direct control was the Order in Council of 1917 forbidding the issue of new securities by provincial governments, municipalities, or corporations without the consent of the Ministry of Finance. The object of this measure seems to have been the assurance of an adequate market for government bonds rather that the exercise of discriminatory control over new investment. In the final year of war, an attempt was finally made to postpone Dominion public works, and to induce provincial and municipal governments to follow suit. On the provincial and local level, the effort did not meet with striking success. Capital outlays of provinces and municipalities on public works and welfare were so heavy that their debt almost doubled during the war.

While there was no formal exchange control during the last war, the government seems to have acted with considerable intelligence in its efforts to maintain the Canadian dollar close to par. With the outbreak of war, transactions in foreign exchange were strictly curtailed to prevent panic and confusion. In the first few months, when heavy British capital withdrawals drove the pound sterling to a premium, Canadian borrowing in London operated as a mitigating factor. Later, when the pound was subject to downward pressure, Canadian loans combined with American to sustain it. To maintain the Canadian dollar in New York, American branches of Canadian banks were required to contribute $100 million of gold to the Department of Finance, loans were floated in New York, and a large cash balance was held there with which to buy Canadian dollars from time to time when the need arose. A precursor of present triangular arrangements was the agreement under which Great Britain was permitted to use part of the proceeds of American loans to pay for Canadian munitions. Some attention seems to have been paid to the France franc as well, customs duties on French goods being avoided because France needed dollar exchange, and subscriptions being made to French loans. The net effect of these measures was to keep the Canadian dollar at a slight discount in New York most of the time, while in the autumns of 1915, 1916 and 1917, it even went to a premium.

Here, clearly, is an area in which the experience of the two wars is in sharp contrast. For since the outbreak of war in September 1939, direct controls have constituted an increasingly important part of federal policy. The Foreign Exchange Control Board began operations immediately. While international finance in the first war was well managed, there can be little doubt that the more complete controls now available provide a much better cushion against inflation in other countries than any of the instruments at hand last time. The wage-price ceiling,

bolstered by rationing of scarce consumers' goods, subsidies to offset losses involved in stable prices for certain sellers, allocation of raw materials, and restrictions on consumer credit, provides a system of price control incomparably superior to anything that was attempted in the last war. As consumers and non-essential industries find themselves unable to buy the things they want, they tend to save more of their incomes, holding idle balances or buying government bonds. Provincial and local governments, far from increasing their outlays as they did last time, have reduced current outlays despite a rise in revenues, and have liquidated both bonded and bank indebtedness.

Perhaps more important than any of these controls, however, is the sort of control involved in direct government investment in war plant and equipment. About $820 million of the billion odd dollars invested in war plant and equipment has been provided by the Dominion government, very largely through federal corporations. In addition, the government has made working capital advances amounting to more than $900 million to private concerns engaged in war production. There is every reason to believe that this assumption of war risks and provision of working capital by the government is largely responsible for the enormous increase in industrial production this time, and that the absence of such a policy in the last war accounts for the lack of significant expansion then. The fact that the best results were obtained in the field of munitions, where government regulation and ownership played its biggest role in the last war, would tend to strengthen this belief.

Important as these direct controls unquestionably are in any explanation of the enormous discrepancy between the course of prices and production in the two wars, it is nevertheless important not to attach undue significance to them, and particularly not to any one of them. The fact that prices rose up to the imposition of the wage-price ceiling in December 1941 and have been stable since has led many to believe that the mere existence of the ceiling is of primary importance in keeping prices down. Such is not the case. The price ceiling has been made effective by a variety of complementary policies. Rationing began in the very next month, and its scope has been continually extended. Subsidies for the express purpose of keeping prices down have been paid on a growing scale. The collection of the National Defence tax at the source began in January 1942, which no doubt reduced consumer purchasing power. The income tax was collected at the source after September, the rates were much higher than in earlier years. The great war loans of February and November required many subscribers to diminish their expenditures, prevented others from increasing them. It is the simultaneous attack on all fronts that has prevented inflation in this war, and not any single device.

Taxation

As we are all very well aware, the use of taxes, and particularly income taxes, has been one of the mainstays of the anti-inflation policy of the present war. Tax revenues in the fiscal year 1942 were over five times the 1939 level, in the current fiscal year will be nearly six times the prewar level. During the war, tax collections have risen from less than 9 per cent of national income to nearly 25 per cent of additional income. This tremendous rise in tax collections has made it possible to finance nearly half of total wartime government expenditures by current revenue.

The tax system with which Canada entered the last war now seems highly primitive. Customs duties plus excises on liquor and tobacco accounted for 90 per cent of total tax revenue. Partly for this reason, and partly because the anti-inflationary powers of taxation were not understood, little use was made of taxation as an instrument for economic control. Per capita tax collections rose only from $16.50 to $27.41 during the war, and tax receipts never reached 6 per cent of national income. While tax collections were nearly 53 per cent of war expenditures in fiscal 1918, only in 1916 did they exceed 35 per cent of total government expenditures. Measured against income-creating expenditures in Canada of the Dominion and British governments combined, which is the proper basis for comparison with the tax policy in the present war, the proportion is less than 20 per cent.

Table 10. Estimated National Income, Dominion Government Revenue and Expenditure, 1915-1919
(all figures in $ million)

	Fiscal Years				
	1915	1916	1917	1918	1919
National Income	2,271	2,412	3,405	3,838	4,260
Total expenditures	284	341	529	650	727
Tax revenues	98	125	175	197	236
Revenues as P.C. of expenditures, a/	34.	36.0	33.2	30.3	32.4

a/ Measured against income creating expenditures in Canada (of Dominion and British governments combined) the percentage recaptured in taxes would of course be still smaller.

Source: Deutsch, op. cit.; and Brown op. cit.

The first efforts to raise additional revenue in the fiscal year 1914-15, took the form of new or increased excise taxes on liquors, wines, tobacco, patent medicines, and perfumes, and a uniform rise in general tariffs of 7½ per cent and of the British preferential duty of 5 per cent.

In 1916 a Business Profits War Tax was introduced and made retroactive to the beginning of the war. It amounted to 25 per cent of profits in excess of 7 per cent for corporations and 10 per cent for individuals and parternerships, and was therefore a "high profits" tax rather than a "war profits" tax. In the next year the rate was raised to 50 per cent for profits in excess of 15 per cent and 75 per cent of profits in excess of 20 per cent.

In fiscal 1918, a personal income tax was levied for the first time in Canadian history. Thetax was regarded as a considerable burden at the time, but from a present viewpoint the rates were very light. Single persons were permitted an exemption of $2,000 and married couples $3,000; the normal tax of 4 per cent was paid on the excess up to $100,000; the surtax on higher incomes ran up only to 25 per cent. In the following year the exemption for married couples was reduced to $2,000 and the rates slightly increased. Even in this last fiscal year of the war, special war taxes raised only 18 per cent of total current revenue, hardly more than the personal income tax alone in the United States.

Financial Thought and Policy

In terms of the stated objectives of financial policy during the present war, the financing of the last war must be considered a failure. It did not succeed in calling forth a large scale war effort, it did not prevent inflation, it did not avoid postwar disturbances. Our analysis so far suggests that the chief reasons for this failure were the lack of adequate direct controls, especially in the realm of war production, and the lack of an effective tax policy. Why were the necessary measures not adopted?

In the first place, the requisite policies were not undertaken because the three aims of war finance mentioned above, so clearly presented in the budget speeches of Finance Minister Ilsley, were never given official sanction during the last war. Indeed, such pronouncements as were made suggest that both in the govenment and in the financial community the primary aim was "business as usual". It would be possible to multiply examples of this attitude ad infinitum, but a few should suffice to establish the point.

To begin with, various statements of Finance Minister Sir Thomas White show clearly his desire not to interfere with the normal prosperity of business enterprise in any way. In his opinion, the mere fact that the country was at war was no reason why the business community should be greatly disturbed. Speaking of steps taken at the very beginning of the war, Sir Thomas said:

> "Arrangements were made with the Canadian banks to maintain liberal credits to their customers in order that general business might not be checked. It was also arranged that commercial discount rates should not be increased."

In his budget message of Feb. 1915, Sir Thomas even rejoices that -

"Business has adjusted itself in a remarkable way to the altered conditions . . . notwithstanding the war we are experiencing a high degree of prosperity."

He was apparently not unduly annoyed at the reluctance of insurance companies to buy war loans yielding only 5 per cent or $5\frac{1}{2}$ per cent.

"Life insurance and other investment companies desired, and, indeed, felt it their duty to invest the trust funds in their hands to the best advantage". 1/

The "business as usual" policy of the government seems also to have been a barrier to effective tax policy. One of the gravest objections to a tax on business profits, Sir Thomas wrote,

"is that it depletes the liquid resources or working capital of business and in consequence leads to inevitable bank credit inflation".

This despite a trebling of the rate of profits during the war!

Again,

"The Income War Tax Act, which was passed by Parliament in 1917, had been drafted the year before. I had hesitated long before introducing it, because, among other reasons which were given at that time, we did not desire direct taxation heavier in Canada than in the United States. This is a maxim which, on account of Canada being a country inviting immigration and business enterprise, I think should be observed as nearly as should be". 2/

Yet when the bill was drafted, Canada was at war while the United States was not.

The antipathy to high taxation was shared by the bankers:

"Industrious and well paid men will be disposed to pause before subscribing to such wild doctrines as ... the placing of all taxation on the well-to-do. ... Probably there was no practical means readily available for the prevention of high prices under war conditions...." (1a)

It seems, too, that they resented being called upon to make loans to government, at rates which were lower than rates on commercial or agricultural loans:

"To the Canadian banks the Victory Loan meant a genuine sacrifice, for they were called upon to facilitate the withdrawal of large deposits which it had taken much effort and many years to build up. No spirit of selfishness, however, influenced the bankers, and they lent their aid heartily to the task of making the loan a success." 3/

"It is impossible as yet to have positive assurance that none of our commercial and industrial organizations will be handicapped for the want of capital which has been invested in domestic war loans. While we are borrowing on a tremendous scale, abroad as well as at home, there is a certain amount of credit inflation in evidence, the money markets are flush for the time being; merchants, manufacturers, farmers, etc. have not much difficulty in getting credits as they need on satisfactory terms, and business activity is accelerated.

1/ Sir Thomas White, The Story of Canada's War Finance, (1921) pp. 14 25.

2/ Op. cit. p. 54.

(1a) J.L. Payne, "The New Economy" Journal of the Canadian Bankers" Association, Vol. XXV, Oct. 1918 - July 1919 p. 127.

3/ Ross, History of the Canadian Bank of Commerce, p. 355.

But if the transient balances, which have created the appearance of opulence are soon exhausted or drawn down to small dimensions, the aspect of the money market may change, and then it is possible that the business community may feel the effects of absorption of $180 millions or so in government bonds". 1/

This fear that government demands for credit might interfere with the normal business of the banks and their clients illustrates not only the prevailing attitude of the time, but also the general lack of understanding of financial processes. Under conditions in which reserves could be built up as easily as was the case during the last war, government borrowing constituted no real competition with borrowing of private enterprise, and the net effect would inevitably be a rise rather than a fall in total deposits. It is true that deposits tended to fall after each loan campaign, which suggests either that government deposits were not included in the total figure or that many people paid for their bonds with cash. In either case, the expenditure by the government of the revenue from the loans would very soon restore the level of deposits. 2/

One of the frankest statements of the "business as usual" attitude of the bankers is the following:-

> "It was the fixed policy of the Canadian Bankers' Association to avoid any steps that would operate to the detriment and inconvenience of the commercial and industrial life of the community, and in this they had the good example of the British banks.. While the financial men of the English speaking world were straining every effort to devise plans which would enable commerce to be carried on with some slight approximation to the rather deceptive motto, 'business as usual' the average individual was frankly in a state of panic. ... Throughout the war the dividend paid to the shareholders remained at ten per cent., with a semi-annual bonus of one per cent, the rate adopted, as already mentioned, in the latter half of 1912. 3/

Apart from this lack of determination to gear the productive and financial organization to war requirements, the chief obstacle to an adequate economic policy was lack of understanding in government and financial circles of the fiscal process. Misunderstanding took four main forms: An identification of credit extension with saving, an identification of credit or bank deposits with real wealth, belief that taxes tend to raise prices, and the facile explanation of price inflation in terms of uncontrollable "outside forces".

One of the clearest examples of the first misconception is a statement of the Finance Minister. Speaking of the educational value of the early war loans, Sir Thomas wrote:

> "They made us understand more clearly than could have been done in any other way the dependence of production and commerce upon credit, that is to say, upon national savings" 4/

Again, speaking of the $1,700 million raised in the three Victory Loans;

> "That this astounding sum, which was almost twice the amount of all deposits in all the chartered banks before the war, should have been made available for the purposes of the Government from the savings of the people of Canada was probably as surprising to ourselves as to the outside world". 5/

Far from being concerned by the inflationary expansion of the money supply, Sir Thomas seems to have regarded it as evidence of increasing prosperity and production. Speaking of the war-time prosperity of the United

---

1/ Editorial in the Journal of the Canadian Bankers' Association, October 1916, p. 17

2/ Ross seems to have noticed this process, without quite understanding it: "Of course", he writes, "the deposits of the banks were depleted (by the war loan campaign) for the time being, but it was surprising to note in how short a time the money came back to them again". Op. cit. p. 341.

3/ Op. cit., pp 312, 320, 385.

4/ Op. cit., p. 28.

5/ Op. cit., pp. 58-9

States and of gold shipments to that country, he laments:

> "It constituted an impressive part of that tide of wealth which from the beginning of the war flowed in ever-increasing streams into the coffers of the Great Republic. The money made by the people of that nation during the war is beyond calculation. Their bank deposits alone increased by ten billions". 1/

This identification of money with wealth was common in the banking community, where it is perhaps somewhat more understandable:

> "The year 1916, though one of fluctuating fortunes in the theatre of war, will remain memorable in the annals of Canadian commerce and finance, because the great increase in Canadian exports set the tide of wealth flowing to this country in unprecedented volume. The era of rising prices, high wages, and production on a large and organized scale, in which capital was the necessary factor, had definitely set in. It may rightly be said that Canada for the first time since Confederation began to realize her full powers". And later, "The prosperity of the country at this time was clearly shown by the fact that in spite of the enormous sums subscribed to the Victory Loan of the previous year, the savings deposits of the banks were higher in the autumn of 1918 than they had been twelve months previously." 2/

This failure to realize that an increase in the quantity of money need not imply an equivalent increase in the supply of goods, and that an increase in bank deposits is no proof that consumption has been reduced but is more likely an indication of the reverse, blinded financial officers to the relationship between monetary expansion and price inflation. This blind spot, in turn, led to the widespread acceptance of the"outside influence" explanation of the price rise. One distinguished banker wrote as follows:-

> "Now that the war is over it can be seen that there was no inflation in the currency as such, but merely that the larger use of currency which accompanies an increase in the volume of commodities and prices; and now that such expansion of trade has disappeared a contraction of our currency has followed without any disturbance whatever". 3/

To the Canadian Bank of Commerce, the rise in the price level was related to banking operations only because of the concomitant rise in the cost of living, which raised problems for bank employees on fixed salaries.

> "In 1916 the staff problem had reached an acute stage . . . The increase in cost of living had by this time reached serious proportions, and was destined to be an increasingly burdensome problem for some time to come. In September the managers were asked to make enquiries as to the cost of board and lodging and as to the rentals paid by officers of the bank stationed at their branches. In December a general bonus was authorized, but the staff was warned that economy must be practised by all."
>
> And later, "The cost of living, as it affected the members of the staff in all its aspects, food, wearing apparel and rentals, gave the management much concern during 1917. In January it was decided to grant war allowances as from February 1, that year, to married officers with salaries not exceeding $4,000 per year" ... "During 1918, on account of the extreme height to which the cost of living had risen, a general bonus was twice granted to the staff, one in June and one in December". 4/

With such complete lack of guidance — and even misguidance — from their financial leaders, it is no wonder that business men, journalists, and the general public were in hopeless confusion on the matter of the price rise and war finance. The Canadian Annual Review for 1918 carries a brief article by the editors on "The Canadian Banks and the War", a telling extract

---

1/ Op. cit. p. 44
2/ Ross, op. cit. pp. 341, 371/2 Sir Edmund Walker, "Canadian Banking", 1923.
3/ Sir Edmund Walker, "Canadian Banking", 1923.
4/ Ross, op. cit. pp. 341, 371.

from which follows:

> "No interest at this time affected so many people, individually, as did the Banks and no combination of interests or individuals was more concerned in war conditions and results, or as it turned out, more patriotic in policy than the Banks. To say that they were well managed is a trite expression; the mere fact that no wave of suspicion or unrest ever reached the doors of a Canadian bank in 4½ years of war is sufficient proof; the popular confidence was shown in the increase of public deposits from a total of $1,012,739,990 on December 31, 1914 to $1,565,419,884 on December 31, 1918". 1/

Immediately following this touching tribute is another editorial called "The Problem of Prices in Canada", which begins thus:

> "The increase in prices which the people had to face in these years was, on the whole, unavoidable. There was profiteering, of course, but it was largely a result, not a basic cause, of the general condition. As the official Report of the Canada Food Board put it late in 1918: 'The main cause of the tremendous rise in prices was increasing scarcity of supplies available to the Allied nations, and the wild bidding that occurred for these when each country was competing separately for supplies." 2/

The writer goes on to observe that in 1918 the Allied governments pooled their buying, but does not observe that despite this fact prices rose faster than ever.

The "Outside influence" doctrine has survived to the present day. F.H. Brown, for example, maintains that:

> "the upward swing of commodity prices came from forces external to Canada rather than within. .. Canadian war finance could not be held responsible in any degree worth mentioning for the rise in prices". 3/

Unquestionably, rising prices in the markets where Canada bought and sold made the problem of price control more serious. Nevertheless, internal prices depend upon the relationship between the domestic supply of goods and the internal flow of purchasing power, and both are subject to regulation, as experience in this war shows. One of the clearest statements of the relation of inflation in the first war to internal financial policy on the one hand and to "outside influence" on the other has been given by Professor Deutsch:

> "It should be emphasized that the rise in export prices which facilitated the rapid shift from investment to export activity was closely related to the Government's inflationary programme and was only partly due to purely external influences. Almost 40 per cent of the total increase in value of exports during 1915-18 over the immediate pre-war level was initially paid for with money raised in Canada and lent to Great Britain - about one half as net advances and the other half as offsets to British loans for Canadian military expenditures incurred overseas. . . It is clear that war-time price inflation in Canada was more the result of domestic policies than the result of forces operating abroad". 4/

We are now facing again the problem created by rising prices in the United States. The problem may well continue throughout the war and postwar periods. It is highly important, therefore, to recognize at once the seriousness of the difficulties such external price rises create, and the possibility of cushioning our own economy against them by proper policy.

Perhaps the best illustration of the confusion with respect to tax policy is the following statement of the Finance Minister's:

1/ Canadian Annual Review, 1918, 5.569
2/ Ibid, p. 571
3/ Op. cit. pp. 34-35.
4/ Op. cit. pp. 533-34.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

> "There is no doubt in my mind that the taxation of business profits in England, United States and Canada has much to do with increased prices of commodities. Taxation always tends to transfer itself to the consuming public, no matter what its immediate incidence may be. Another and perhaps the gravest objection to the tax is that it depletes the liquid resources and working capital of business and in consequence leads to inevitable bank credit inflation". 1/

He apparently did not believe that similar evils were attached to taxes on imports. On the contrary, he seemed pleased with what he regarded as the consequence of the tariff increases at the beginning of the war:

> "The result of this customs'increase was to almost immediately increase the national revenue and greatly stimulate business throughout Canada. It made us more self-contained, encouraged production, both on farm and factory, and assisted in conserving our gold reserves.." 2/

Having no conception of the importance of tax collections as a device for reducing consumer purchasing power and thereby maintaining the price level, Sir Thomas was in no mood to annoy the business community or the electorate by heavy increases in taxes:

> "It has been suggested that we should have levied heavier taxation at the beginning of the war. The effect of this would undoubtedly have been to increase the business depression and probably, through public discontent materially affect the extent of our participation in the war." 3/

It is scarcely surprising that the general public displayed even more economic illiteracy than its leaders. The naivete with respect to financial matters was so marked as to impress even Sir Thomas White. He notes a few outstanding cases:

> "As illustrating the lack of knowledge in these early days as to the precise nature of a Government loan, I conclude with the story of a staunch Conservative yoeman, who had attained the dignity of a reeveship, who wrote me somewhat as follows: 'I notice that the Government is going to make a public loan of fifty million dollars. In my opinion this is the best move the Government has yet made. The people here will take all the money you can lend us and if you choose me to do the distributing I will guarantee that no Grit will ever be elected in this constituency". 4/

Speaking of the later Victory Loan campaigns:

> "Bonds were unknown to the greater part of the Canadian public when these campaigns began. Some worthy women believed that in subscribing to a Victory Loan they were giving their money gratis to the Government as a patriotic contribution towards the expenditure of the war .... I remember the case of a woman who subscribed for and received a one-thousand dollar Victory Bond with coupons attached. She did not know it had any value but looked upon it as an official receipt for her contribution of one thousand dollars to the Government for war purposes. She had it framed and hung up in her parlour and was surprised beyond measure when she found out it was one thousand dollars and would yield her fifty-five dollars a year in interest. Another case which came to my attention was that of a man who wrote the Department asking for a cheque for interest due upon his bond. He said that he understood it could not be paid until the appropriate coupon was destroyed and that he had destroyed it by burning in his stove". 5/

White also remarks upon a more understandable confusion:

> "At one time during the year (1917) there was agitation for what was called the 'conscription of wealth'. This was taken by some to mean the confiscation of deposits in our chartered banks, and in consequence of the publicity given to the expression there were 'runs' in certain parts of Canada. So serious did the matter become

a

1/ Sir Thomas White, op. cit.
2/ Sir Thomas White, op. cit.
3/ Op. cit. p. 11
4/ Op. cit. p. 29
5/ Op. cit pp. 65-66.

that I was obliged to make a statement in the House of Commons that so far from intending to confiscate deposits, the Government's policy was to promote and foster national savings". 1/

It is interesting to note that in commenting upon the simple nature of the Canadian public, Sir Thomas once again reveals his own fallacious identification of bank deposits with savings.

With such universal lack of understanding of the financial process, surely there must have been complete lack of guidance from professional economists as well? Unquestionably, economists have a more complete grasp of fiscal problems now than they did a generation ago, and some highly useful new tools of analysis have been developed. Nevertheless, it remains true that at least some Canadian economists know what was going on during the last war and issued warnings against it. Professor Stephen Leacock, for example, pointed out to the bankers in their own Journal the dangers of confusing money with wealth:

"It is a bold, if not an insulting remark to make in a Bankers' Journal, that the fallacy is one to which bankers are from the nature of their occupation peculiarly liable". 2/

W.C. Clark, then Professor of Economics at Queen's University, and now happily, Deputy Minister of Finance, gave in the same Journal a perfectly clear-cut analysis of the price rise in terms of the Fisher equation.

"Undoubtedly in all the warring countries the growing abundance of money and credit has been an ever more important cause of high prices than the decreasing supply of goods. .. In Canada we find a general reluctance to believe that inflation has had anything to do with the abnormal rise in prices. The above-mentioned causes acting on goods are held to be reason enough for the advance, and the admittedly abnormal increase in the various forms of currency is regarded as effect rather than cause." 3/

An astute observation made during the war by Dr. Adam Shortt is worthy of quotation:

"While the capital is being invested the stimulus to trade and industry is just as great from the enterprise doomed to failure as from one destined to success. So in the case of the expenditure on war. The prosperity due to the disbursement of large war loans is as beneficial to the trade and industry of the country, while the expenditure continues, as if it were made with the most certain prospect of ample return on the funds expended. Only after the war expenditure is completed and no economic returns are forthcoming to replace the wealth destroyed do the unfortunate consequences make themselves felt, in the absence of replacement of the capital expended, with which to meet the next stage of capital production." 4/

W.A. Mackintosh, then Professor of Economics at Brandon College, later also of Queen's, and now — fortunately for the nation — Special Assistant to the Deputy Minister of Finance, was equally clear on the question of the price rise. 5/ While stressing the complexity of factors determining individual prices and pleading for more information as a basis for price control, he stated bluntly that "The reason prices doubled during the war was (monetary) inflation". In view of Dr. Mackintosh's present position and the impressive coterie of professional economists who now surround him in his own and other Ottawa Departments, his observation on the role

---

1/ Op. cit.p. 53
2/ Journal of the Canadian Bankers' Association, Vol. XXIV, p. 302
3/ Ibid. Vol. XXv p. 126
4/ Op. cit. p. 15
5/ "Economics, Prices, and War", op. cit.

of economists in the last war is of interest:

> "With few exceptions, they (the War Boards) asked and received but little aid from Canadian economists. Too often the advice offered was in the nature of a sermon on the danger of tampering with economic laws, when what was desired was 'practical advice' ".

Conclusion

Since our concern is with postwar economic policy, this analysis of the relationship of wartime policy and wartime economic developments may seem unduly laboured. It teaches us, however, two lessons of great importance to postwar policy. One of these lessons is 'general', the other 'specific' ".

The 'general' lesson to be learned from the foregoing story has been mentioned in our introductory section. If our economy is to be kept stable after the war, it is essential that all people and groups have some understanding of the basic economic principles which must underlie policy formation, as well as a clear concept of the true nature of the postwar problem. Experience during the last war makes it all too plain that limitation of knowledge about economic principles and problems to the professional economist can lead to disastrous economic policy. Last time we muddled through in spite of the confusion in the economic sphere; but last time the war effort generated only 10 per cent of our national income. This time the war effort is responsible for half our national income, and failure to adopt suitable postwar policies may destroy our economic system forever.

The 'specific' lesson to be derived from our study of the first world war is the need for a united front in the fiscal and monetary sphere if inflation is to be avoided. Since inflation is a problem even more pressing in postwar booms than in wars themselves, anything that can be learned in this field is of direct relevance to the formulation of postwar economic policy. The failure of war finance in World War I to achieve the financial objectives of World War II, demonstrates the effectiveness of a rigorous tax policy combined with direct controls of prices, wages and production. It tells us in terms that cannot possibly be misinterpreted that until the threat of post-war inflation has completely disappeared, these direct controls and this tax policy must be retained. Otherwise - the volcano.

In all fairness, it must be said that financial mismanagement in Canada during the first world war was scarcely worse than it was in England or in the United States. The American inflation was almost as bad as Canada's, the English inflation was somewhat more severe. The level of understanding of fiscal problems and policies seems to have been no higher in the United States, and not so very much higher in England. On the other hand, American war expenditures surpassed 30 per cent and English war expenditures 40 per cent, of the respective national incomes; the financial problem was clearly much less pressing in Canada. In any case, while misery loves company, it will be small comfort if other countries than ourselves adopt disastrous economic policies after this war. In War II Canada has provided a model of wartime financial policies which is the envy of experts throughout the United Nations. There is no reason why she can not do the same in the postwar era.

III. THE "BREATHING SPELL" NOVEMBER 1918 - SUMMER 1919

The economic picture for the six months following the Armistice was one of hesitation and confusion. The variations among prices, production, and employment in different parts of the economic system were so pronounced that the period is difficult to characterize by any single label. However, it is better described as "recession" than by any other term in the jargon of the business cycle theorist. The index of physical volume of business (seasonally adjusted) fell from 72.4 in January to 66.2 in June of 1919.

Production and Employment 1/

Industrial production declined from a (seasonally adjusted) index of 65.4 in January to 59.8 in June. The most severe setbacks occurred in those fields where prior expansion was most directly related to the prosecution of the war. The number of men in the armed forces dwindles with astonishing rapidity. By the middle of 1919, demobilisation was well-nigh completed, and it was entirely finished by the end of that year. Employment in munitions factories shrank from over 40,000 to under 1,000 in the two months after hostilities ceased, and employment in manufacturing of explosives dropped from 3,000 to 500 in about six months. The index of flour pro-

duction for one large company fell from 134 to 15 in the first two months of 1919 and output of all companies shows considerable contraction, especially if corn flour is included. Output of pulp, and paper, chemicals, coal, iron and steel also showed rapid contraction. Employment in the manufacture and repair of railroad cars, in bridge construction, in production of boilers, engines, and tanks, all exhibit significant reductions. Hog and cattle slaughtering and output of electrical apparatus and supplies, sugar and cotton goods declined moderately.

Yet some fields of activity registered gains over the same period. The construction industry was particularly prosperous. In the six months after the Armistice, the value of contracts awarded was more than twice as high (68 million) than in the same period of the previous year ($29 million). Total construction reached a value of $190 million for 1919, compared to $99 million in 1918. The estimated cost of building permits in 35 major cities increased from $37 million to $77 million in the same period. From January to July 1919, value of building permits soared from $1.3 to $9.8 million. Residential building was dominant factor in this expansion, growing from $15 million in 1918 to $47 million in 1919 [1].

The infant automobile industry proved very healthy in these months, employment increasing from 5,362 in 1918 to 6,771 in 1919 and value of production rising from $67 million to $81 million. [2] Two-thirds of the expansion during 1919 took place between January and June. Production of pneumatic casings shows a sympathetic rise. Employment in the shipyards grew until March, and employment in transportation showed marked gains. Lead production rose from 1400 tons in January to 1900 tons in July. Coke production grew from 130,000 to 140,000 tons in the same period. Production of rubber goods, cotton goods, clothing, boots and shoes, the number of telephones in use, cigars and cigarettes released for consumption, and department store sales all increased, suggesting that consumer spending was well maintained throughout the period. Newsprint production was virtually constant.

The net result of these diverse movements was a slight shrinkage of output of consumers' goods, somewhat greater declines in output of producers' goods and in business activity. The number of wage earners in manufacturing fell 4 per cent, from 522,000 to 500,000 between July 1918 and July 1919. Trade union unemployment was only 5.2 per cent at its peak in February 1919, and had been cut in half by June.

Foreign Trade [x]

Foreign trade nautrally followed developments in production and employment very closely, and was indeed a factor in those developments. Total value of exports fell precepitously from November to May, with war materials and supplies weighing most heavily in the collapse. Explosives, cartridges, shells and other munitions, nickel, lead, zinc and copper suffered the greatest losses, but exports of wheat, butter and cheese and wood products also diminished. On the other hand, physical exports rose in March and April, and exports of automobiles and parts soared to unprecedented heights in 1919. Exports of asbestos rose from January to March, fell in April, went up again in May. Bacon exports moved upwards from October of 1918 to July of 1919, while printing paper and raw wool also displayed noticeable strength. Canned salmon exports nearly trebled from January to March, declined until September.

1/ Figures from The Financial Post Survey, 1926
2/ The Financial Post Survey, 1926

x Sources: as above

Imports fell less than exports. Coal, bauxite, raw cotton, and wool imports dropped off sharply, but imports of crude petroleum, raw rubber, sugar and silk, increased. While trade remained favourable and the balance for the year as a whole was higher than in 1918, nevertheless the active balance was drastically cut between the autumn of 1918 and the summer of 1919.

Prices xx

The movements of prices show as many disparities as do fluctuations of other economic indices. The index of wholesale prices fell moderately, but average prices of consumers' goods were quite stable and retail prices rose slightly. Prices of producers' goods declined very little, and the same is true of the index of prices of raw and semi-finished materials. Farm prices dropped from March to May, recovered throughout the rest of the year. Prices of fully and chiefly manufactured goods were weak. The trend in cost of living was steeply upwards, but the index fell in February and March. Wage rates no longer lagged but rose faster than living costs in this period. Prices of steel, tin, copper suffered serious losses. Butter and cheese prices declined during the spring and summer months, but resumed a sharp upwards trend in the fall. The price of hides soared upwards until August, plunged just as precipitously after September. Wheat prices were stabilised, but were reduced after August as government marketing was undertaken.

These somewhat random observations may serve to give a picture of the unsettled conditions that prevailed during the "breathing spell". The difference among movements of various economic series is more striking than their similarities, and certain of them show violent fluctuations indeed. Yet it is undeniable that the wartime prosperity was interrupted, and that business conditions as a whole deteriorated.

Causes of the Recession.

What were the factors which made the months following the Armistice a period of recession on balance?

Most obvious, the cessation of hostilities created an aura of uncertainty, unrelieved by any comforting policy statements from Ottawa, which made exporters, financiers, industrialists, and business men in general reluctant to embark on any new venture or to bind themselves to new contracts. The sudden and sharp contraction of demand for war materials and supplies and the subsequent shrinkage in the export surplus were no doubt the factors most directly responsible for this hesitancy and for the actual declines in income and employment. The rapidity of the demobilisation, despite soldiers' allowance, no doubt resulted in temporary unemployment, reduced incomes expendable by men formerly in the armed forces, and discontent. An incidental factor, quite apart from the disruption of the foreign market, was the relatively low wheat yields of 1918 and 1919, which meant lower incomes for some farmers.

Secondly, monetary expansion was arrested, at least for the time being. The total supply of money, including bank deposits and note circulation, fell from October to March. Current loans - where reaction lagged somewhat behind business changes--dropped about 9 per cent from May to August 1919. Call Loans - which usually anticipate speculative uncertainty - also experienced a drop in January and February 1919, but increased the following month. General common stock prices - after slight hesitation immediately after the war - resumed their upward trend, advancing over 9 per cent in the first five months of 1919. Industrials and bank stocks were strong, but utilities fell off. The banks increased their holdings of non-governmental securities somewhat, but liquidated substantial amounts of their holdings of governments. On the whole, the influence of banking and monetary policy in these months was deflationary.

The same may be said of fiscal policy, despite the rise in the deficit from $389 million in fiscal 1918 to $414 million in fiscal 1919. In the first place, while government expenditures for the fiscal year as a whole were higher than in the previous year, they declined during the months just after the Armistice. In the second place, there was a significant change in

xx Source: Prices and Price Indexes 1913-1940, D.B.S. 1942
Original Monthly Statistics - D.B.S. 1934
and Charts.

the composition of government spending. Capital expenditure and investments were cut from $128 million in fiscal 1918 to $47 million in fiscal 1919, while ordinary expenditures were enlarged from $178 million to $233 million. 1/ Moreover, while "war expenditure" continued upwards, less of it was for arms and munitions and more of it for soldier resettlement, pensions, pay and allowances, and so forth. This change in the nature of government spending may not have diminished its secondary effects through consumer spending ("multiplier" effects) but may very well have reduced its secondary effects through induced private investment ("relation" effects).

Finally, although tax collections rose less than outlays, the tax structure was changed in a manner which may have discouraged private enterprise. The personal income tax imposed in 1917 was highly unpopular, as we have seen. Rates were raised in 1918, and 1919 was the fiscal year in which collections of any importance were made. Revenue from the income tax amounted to $9.3 million in that year and to $20.3 million in fiscal 1920. Similarly, the business war profits tax was revised in 1917, a graduate rate progressing up to 75% replacing the previous rate of 25%, and the size of firm exempted from the tax reduced from those with capitalization less than $50 million to those with capitalization of less than $25 million. The yield of the tax rose from $21 million in fiscal 1918 to $33 million in fiscal 1919 and $44 million in fiscal 1920. Customs duties produced $144 million of revenue in 1918, but only $3 million more in the following year, and the yield of excise taxes also rose only $3 million from 1918 to 1919. In the latter year rates on imports of agricultural implements were actually cut, while the 5 per cent preferential duty on British goods and the $7\frac{1}{2}$ per cent levy on other goods, which had been imposed as war measures, were repealed. Thus the burden of taxation was partially shifted from the consumer to the business men or investor; and there can be little doubt that business men and investors were aware of it. 2/

Possibly of greater importance than Canadian fiscal policy was the sharp reduction of British expenditure in Canada. The cost of munitions purchased by the Imperial Munitions Board had already fallen from $388 million in 1917 to $261 million in 1918, and of course dropped to an insignificant figure covering the few contracts not cancelled in 1919. Moreover, some three-quarters of the contracts placed by the United States for Canadian shells, which reached a total of $140 million, were cancelled in November 1918.

The growing strength of the trade unions may have contributed to the general uncertainty in the business community. Trade union membership grew 50 per cent from the end of 1918 to the end of 1919, and the time lost through strikes soared to unprecedented heights during the latter year.

The simple fact that the end of the war coincided with a whole constellation of seasonal declines must not be overlooked. Even the reduction of total money supply was to no small degree a seasonal phenomenon. Similarly, while department store and mail order sales showed upward trends for the whole period, there was nevertheless a seasonal decline in the early months of 1919. We have emphasized the general strength of the construction industry in the period, but from November of 1918 to March of 1919 cost of construction undertaken and employment in residential building suffered a seasonal relapse. The decline in flour production is much more marked when the seasonal factor is included than when it is eliminated, and the same is true for coal and lead, and for experts of copper, zinc, nickel and cheese. The trend of employment in meat packing and slaughtering was upwards, the seasonal movement downwards. Even in the automobile industry employment fell from November 1918 to January 1919. Farm prices moved along an upwards trend, but fell in February and March. Despite definite strength over the whole year, butter prices fell from April through June and cheese prices from May through August. And so it went;

1/ Figures from The Financial Post Survey and J.S. Prentice, op. cit.

there were always enough factors undergoing temporary declines to prevent prices, production and employment as a whole from moving upwards.

The Canadian economy was very shakily balanced during this period, ready to respond violently to a firm push in either direction. There were enough deflationary forces to have caused the economic system to collapse in the Abyss of Depression, had any more pressure developed in that direction. As it happened, the strongest push came from the other side, and the economy tumbled into the volcano of Inflation instead.

Government Attention to Reconstruction and Re-establishment.

That the government of the day was not altogether unmindful of problems which might beset Canada's economy after the war is evidenced by the establishment in October 1917 of a Reconstruction and Development Committee to deal specifically with these problems. Definite plans were made for re-establishment of returned men. For example, questionnaires were sent to all soldiers overseas to ascertain the probable distribution of returning men by trades and territorial areas. But details concerning plans which may have been made for industrial, agricultural and general readjustments to peace-time economy in Canada are indefinite and obscure. Indeed, it is possible that such plans were considered relatively unimportant; it may have been hoped that economic readjustments would be effected automatically, in response to reconstruction needs abroad and consequent development of international trade.

When the Great War ended Canada had about 375,000 soldiers on strength, of whom around 300,000 were Overseas. As a result of the questionnaire completed by all men overseas, those in charge of re-establishment had a fairly good working estimate by March 1919 concerning the occupations and districts these returned men would normally prefer. Through cooperation between the provincial governments and the Department of Labour a chain of employment offices was rapidly extended, and by June 1920, when this branch was demobilized, the actual number of men placed totalled 109,493. As we have seen demobilization was actively effected in the first half of 1919, and practically completed by the fall of that year. Towards the close of 1919 it became apparent that re-establishment was not a complete success, and special unemployment relief of almost $5,000,000 was expended during the winter of 1919-20. The following winter this special relief expenditure had been reduced to $1,500,000.

Assistance was also given to returned men towards vocational training and completion of university courses, and to soldiers wishing to settle on farms. Loans for the latter purpose had reached about $82,000,000 by March 31, 1921. Pension payments were naturally heavy, for the war had cost Canada over 56,000 lives and about 150,000 wounded. The percentage of permanently disabled men was high. Cost of pensions to March 21, 1921 was about $91,000,000. Aggregate re-establishment costs for returned men to March 31, 1921 totalled approximately $443,000,000, including $164,000,000 for gratuities upon demobilization, $102,000,000, for re-establishment, $ 2,800,000 for transportation of dependents, and the foregoing amounts for pensions and farm loans.

Some effort was also made from the employers' end. In the latter part of 1918, the Chairman of the Imperial Munitions Board wrote the following letter and attached questions to manufacturers of munitions:-

Imperial Munitions Board
Ottawa, October 24/18.

Dear Sir,-With a view to determining what classes of work could be carried on most advantageously by manufacturers at present producing munitions, we desire to compile certain data which may be of use to the organization which may be set up by the Government of Canada for dealing with the problems incident to the close of hostilities, whether this event be in the near or distant future.

We would be grateful to receive from you answers to the attached questionnaire, with such added information as you may consider may be of service. We appreciate that in some cases these answers must by necessity be approximations.

If the manufacturers having contract relations with the Board to whom this communication is addressed extend to us their confidence in supplying the information desired, care will be taken

to treat the information as confidential.

Upon receipt of the replies we will tabulate the particulars without names and will hand them over to the Government authorities here. Later, if the Board is asked for details in particular, we will communicate with the manufacturers before supplying them.

Yours faithfully,

(Signed) J. Flavelle,
Chairman.

1. How many men have you now employed on purely munitions work? and how many women?

2. What percentage of your present complete turnover does your munitions business represent?

3. What percentage of your complete personnel do those employed on munitions represent?

4. What are the staple lines which previous to the war represented the larger part of your Company's turnover?

5. Have you previously done export business to any appreciable precentage of your turnover? If so what percentage?

6. With what countries did you do this export business?

7. If you have not actually exported goods, have you at any time investigated into the possibilities of exporting articles such as you manufactured prior to the war? If so, what were the results of such investigations? What action do you consider it would be desirable to take to secure such export business?

8. Have you formulated any plan for the use of your munitions equipment, or for otherwise adding to your lines at the conclusion of the war? If you are warranted in doing so, we will appreciate being advised what such plans contemplate." 1/

The emphasis on the export market is worthy of note, indicating as it does that hopes for readjustment lay primarily in that direction. Unfortunately, no record appears to be available concerning the replies which may have been received. In any case, no Government organization appears to have been actually set up to analyse and direct industrial and trade adjustments in Canada.

1/ "David Carnegie, The History of Munitions Supply in Canada, 1914-1918, Longmans 1925, p. 278.

IV. POSTWAR BOOM: SUMMER 1919-SPRING 1920

The boom which began in the summer of 1919 was shortlived. Most industries suffered a downturn in the early months of 1920, and by fall deflation was general. The boom was characterized by accelerated price inflation, a high level of employment, expansion of industrial production and physical volume of business, and a rise in imports which exceeded the rise in exports.

Prices and Incomes

Since price movements and the concomitant changes in incomes were the dominant feature of the upswing, we begin our description with them. The index of wholesale prices adjusted for seasonal fluctuations climbed from a nadir of 126.2 in March 1919 to an apex of 164.3 in May of 1920. The unadjusted figures show a slightly greater rise in prices, with the same turning points. While prices of consumers' goods show a determined upwards thrust throughout the whole period from the beginning of the war to July of 1920, their rise was most rapid from February 1919 to July 1920. In those seventeen months they rose 53 points, somewhat more than wholesale prices in general. Producers' goods prices followed the general level more closely, increasing from 138 in April 1919 to 182 in May 1920, but rose less rapidly than the average in the earlier months, and more rapidly later.

There is some suggestion of readjustment of relative prices during the postwar inflation. Prices of raw and partly manufactured goods made up their wartime lag behind prices of fully and chiefly manufactured goods. The former went up from 130 in February 1919 to 182 in May 1920, the latter from 138 in July 1919 to 183 in July 1920. Farm prices lost some of the relative gains of the war period, climbing only from 134 in March 1919 to 178 in May 1920. Cost of living leaped from 131.5 in March 1919 to 185 in June 1920, narrowing the gap between this and other general indices. The suggestion is borne out by movements of particular prices. For example, in contrast to their wartime behaviour, prices of butter, hides, and paper sulphite rose more than the average, while prices of tin, copper, and wool rose less than the average. When controls of wheat prices were removed in July 1920, they jumped from 132 to 170, leaving wheat prices with a somewhat smaller increase over the war and postwar inflationary period as a whole than was shown for prices in general.1/ On the other hand, prices of steel and linseed oil again rose more, and prices of retail foods in most centres again rose less than the average.

Data for annual averages provide additional support for thesis than the postwar boom was a period of partial readjustment of relative prices. For example, prices of wood and wood products, which had lagged considerably during the war, rose rapidly afterwards, with the net result that in 1920 their index was almost exactly equal to the general index.2/ Conversely, the price rise of iron and steel products slowed down so that in 1920 they too, were almost exactly equal to the general index. The spreads between the general wholesale price level and prices of non-metallic minerals, fibres and textiles, farm products, consumers' goods in general and foods, beverages and tobacco in particular, building and construction materials, were all diminished. The margin between raw and partly manufactured goods of marine origin and the corresponding fully and chiefly manufactured goods was also cut down. However, prices of field and vegetable products were still further above, and price of animal products and chemicals still further below, the general average.

Similar adjustments took place in wage rates. Wages in general caught up with and passed the cost of living, narrowing the gap between wages and wholesale prices. Salaries and wages rose from 54.6 per cent of national income payments in 1919 to 57% in 1920 3/

1/ Of course, by this time deflationary forces were already gathering considerable strength. Otherwise, it is possible that wheat prices might have risen further.

2/ 1913 = 100.

3/ Investment income also rose slightly, from 9.6 per cent in 1919 to 10.7 per cent in 1920. Entrepreneurial withdrawals remained virtually constant at 30 per cent. The decline came in "no pay allowances" and "other labour income and direct relief." Thus the relative position of labour as a whole for other income. Source: D.B.S. Bank Debits to Individual Accounts, April, 1943.

Wages of steel workers rose rather less than 25 per cent and wages of "common steel and coal workers" only about 25 per cent, considerably less than the average. Wages of electrical machinists, millwrights', blacksmiths', and moulders' helpers also increased less than the average. On the other hand, skilled moulders' wages rose disproportionately in the postwar boom, as they had in the war itself.

Inflation, then, was even more pronounced during the postwar boom than during the war. On the other hand, such data as are available suggest that in contrast to wartime experience, the distortion of the price structure was not increased, and may even have been somewhat diminished.

Production and Employment.

Industrial production began its ascent in April 1919, when the index stood at 74 per cent of the 1919-24 average, and reached its peak of 113.8 in January 1920. The physical volume of business began to climb somewhat later, but reached its pinnacle at the same time. The Wood-Gundy index of business activity began its upswing in May, but did not attain its maximum until March 1920. Trade union unemployment fell from February to September 1919, when it touched the extremely low level of 1.8 per cent -- a level never achieved again until the present war. It grew to 4 per cent in the winter of 1920, but shrank again to 2.1% in June.

Individual series cover a considerable range in the timing of their fluctuations. Coal production for example, did not recover until June 1919 and did not reach its peak until November 1920, output nearly trebling in the interval. Pig-iron production did not reach its recession low until October 1919, registered its high in October 1920, doubling in that time. Output of steel ingots and castings followed a similar course. Yet output of individual coal, iron, and steel companies show violent fluctuations which do not conform to the general pattern even when smoothed. Value of construction contracts awarded reached a temporary high of $25.6 million in August 1921.

Flour production expanded from 990,000 barrels in February 1919 to 1,354,000 in January 1920, sugar manufacturing enlarged its output from 54 million pounds in March 1919 to 109 million in March 1920. Cattle-slaughtering achieved a threefold increase between February and November of 1920, but hog-slaughtering did not begin to rise until August 1919 and reached its summit in November of the same year. Cigars and cigarettes released from consumption were at their limit in the autumn of 1920. Automobile production grew from 4,357 in January 1919 to 10,500 in April 1920, and output of tire casings increased about 65 per cent from January 1919 to June 1920. Department store sales seemed to have been at a maximum in the summer, and mail order sales in the spring, of 1920. Newsprint production increased very little, reached the top in March 1920.

Such a diversity of movements makes it somewhat difficult to set exact limits to the upswing. However, the picture as a whole seems to justify our demarcation of summer 1919 to spring 1920.

The boom was so short, consisted so much of recovery of recession losses on the one hand and pure inflation on the other, that it might almost be termed "a boom without prosperity". It brought no significant improvement in the standard of living. For 1920 as a whole, the index of industrial production with 1926 equal 100 was only 69.9 compared to 65.5 in 1919, and physical volume of business rose less than four points. The index of employment actually fell from 107.8 in 1919 to 106 in 1920. Income paid out rose less than prices, so that per capita real income was lower in 1920 than in 1919. Real labour income did, however, rise slightly. Commercial failures increased fairly steadily throughout the whole period up to 1923. Since 1919 was no great improvement over 1918 so far as economic well-being was concerned, it seems clear that the postwar "boom" was not a period of marked economic progress.

TABLE 11

Indications of Inflation and its Effect on Available Purchasing Power

Year	Income Payments 1/ (a)	Cost of Living Index, 1926= 100 (b)	Purchasing Power 2/ (a ÷ b)
1919	3,987,837	107.2	3,719,997
1920	4,460,061	124.2	3,591,031
1921	3,803,253	109.2	3,481,917
1922	3,686,618	100.0	3,686,618
1923	3,838,607	100.0	3,838,607

Foreign Trade

Both value and physical volume of exports fluctuated wildly during the postwar boom, with value showing a fairly constant and volume a gently falling trend. During the period of greatest general recovery, from April 1919 to January 1920, exports increased from $62.3 million to 121.5 million, and this expansion unquestionably contributed heavily to the general upswing. Imports show a more clear-cut cyclical movement, value rising from $54.2 million in April 1919 to 142.5 million in March 1920, volume increasing from an index of 71.2 in March 1919 to 119.1 in January 1920 and 117.0 in March. The balance of trade was favourable throughout the whole of 1919 and in the first two months of 1920, and was unfavourable from then until the autumn.

As we should expect from the developments of employment and production, movements of individual commodities show substantial deviations from the general pattern of foreign trade. Volume of copper exported increased fivefold from April 1919 to March 1920; nickel exports increased over tenfold from May 1919 to November 1920, asbestos exports trebled from August 1919 to September 1920. Lead exports, on the contrary never regained their wartime level, and fell off sharply during the postwar boom. Wheat exports leaped from less than 2 million bushels in December 1918 to over 12 million bushels in November 1919, fell to 3 million in the following spring, but soared to new heights of 35 million bushels in December 1920. Exports of flour, bacon, and automobiles, however, reached their peak in December 1919. Exports of cheese, salmon, and woodpulp are greatly affected by seasonal factors, but all showed gains too prodigious to be explained in seasonal terms, alone.

The Canadian dollar depreciated in New York but appreciated in London during this period. A low of 84 cents in New York was established in December 1920. This fact no doubt stimulated Canadian exports to the United States and discouraged imports from that country with reverse effects on British trade.

The following table gives some indication of these effects:

1/ Composed of salaries and wages (which are one half of total), withdrawals of working proprietors including farmers (one quarter of total), and "other labour income, net dividends and net interest". c.p. 60, "National Income of Canada, 1919-1938, Part 1".

2/ It is inaccurate to apply the cost of living index to other than that part of total income payments which was spent on consumers goods during the year. Money Savings of all sorts should be deleted before applying the index. However the broad picture is not disturbed by this oversight. (Cost of Living Index from p. 68 above mentioned source).

TABLE 12

The Canadian Balance of Trade, 1918-21.
($millions)

Area	1918	1919	1920	1921
All countries	287.0	310.3	-161.7	$ -27.4
United States	-272.5	-300.0	-295.5	211.9
United Kingdom	487.8	369.7	100.3	183.3

Thus there was some tendency for trade with the United States to become less unfavourable, and for trade with the United Kingdom to become more favourable. There were, of course, many other factors operating upon the balance of trade, but it seems likely that exchange rates, determined as much or more by international payments among other countries as by Canada's own international position, were a significant factor.

Another effect of the exchange situation was offering in Canada of British-held Canadian government securities at prices below the ruling price of corresponding Canadian-held issues, such as the Victory Loans. This tendency proved so worrisome to the Finance Ministry that an embargo was placed on such sales throughout most of 1920.[1] The net increase in British and foreign holdings in Canadian securities was $25.1 million in 1919 and $143.2 million in 1920.

Finance

The total quantity of money resumed its upward course in March, 1919, reached a seasonal high in October, and climbed to a slightly higher level one year later. The expansion over the whole period did not exceed 20%, the total volume of money standing at $2.2 billions at the end of 1920. Active note circulation and demand deposits rose relatively little, the bulk of the increase taking place within the category of notice deposits. Current loans show more expansion in absolute terms than other types of bank asset, from $1,012 million in August 1919 to $1,405 million in October 1920. Investment holdings increased from $425 million in February 1919 to $671.4 million in October of the same year and then tapered off. By February 1920 they were down to $411 million. Call loans in Canada show the biggest percentage growth, from $79.2 million in February 1919 to $132 million in January 1920.

The banks gave strong support to the government bond market in the spring and summer of 1919, their holdings shooting up phenomenally. After October, however, a rapid liquidation of these securities took place, and by September 1920 bank holdings of governments were almost down to their postwar low of March 1919. Yields of government bonds show a distinct rising trend up to November 1920 probably reflecting liquidation by wartime purchasers. Bank holdings of non-government securities were virtually constant for a year after the Armistice, but declined rapidly during 1920. Whether or not bank purchases and sales were a significant factor, the stock market followed bank operations closely, rising somewhat through 1919 and falling after January 1920. Industrials, pulp and paper, and textile stocks continued to rise into the summer of 1920, but iron and steel, milling, and food stock fell off during the early months of 1920 and utilities sagged from May 1919 onward. The number of shares traded increased more than sixfold from the beginning to the autumn of 1919.

Since the percentage increase in money supply was considerably less than the percentage rise in prices and supply of goods increased to some extent, one would expect to find a rise in velocity of circulation of money in the period. Available figures of bank clearings show close to a 100% increase from the spring of 1919 to the fall of 1920, which indicates a

---

1/ Canadian Annual Review 1920, pp. 25-6 (f. above, "monetary policy".

pronounced rise in velocity of circulation of bank deposits. Indeed, it appears that activation of previously created deposits was as important a factor in the postwar inflation as was the creation of new one.

Cause of Inflation: Fiscal Policy

The immediate aftermath of war proved more costly for the Canadian government than the war itself. Both outlay and deficit were at their highest levels in fiscal 1920, a period roughly the same as the upswing. Monthly expenditure reached a peak of $60 million per month, 1/ from March to November 1919, when the most violent boom developed. Provincial governments, too, spent more in 1920 than in 1919, and more in 1919 than in 1918.

In addition, the composition of expenditures changed once again, this time in a manner accentuating their "leverage" effects. War expenditures were down slightly for the fiscal year as a whole, but increased enormously from April 1919 to January 1920. Public works expenditures, including outlays on railways and canals, were more than double their level for the preceding fiscal year. Only $69 million of the $786 million total was spent for pensions and re-establishment. These expenditures unquestionably provided an enormous stimulus to expansion.

It is interesting to note, too, that the flotations of Treasury bills in fiscal 1920 just equalled retirements, and heavy borrowing was concentrated during the Third Victory Loan campaign in November. 2/ Thus during the early months of 1919 government deficit-spending must have ✓ been almost unadulterated inflation.

Table 13. Dominion Government Expenditure and Revenue, 1914-1924
($ millions)

Fiscal Year Ended March 31	Nearest Calendar Year	Expenditure (1)	Revenue (2)	Deficit (3)
1914	1913	186.2	163.2	23.0
1915	1914	248.1	133.1	115.0
1916	1915	339.7	172.1	167.6
1917	1916	498.2	232.7	265.5
1918	1917	576.7	260.8	315.9
1919	1918	697.0	312.9	384.1
1920	1919	786.0	349.7	436.3
1921	1920	528.3	434.4	93.9
1922	1921	463.5	382.0	81.5
1923	1922	434.7	394.6	40.1
1924	1923	370.6	396.8	26.2

1/ Prentice, op. cit. p. 6

2/ Curtis, op. cit. p. 20

(1) p. 741, 1924 Canada Year Book.

(2) 1924 Canada Year Book. ibid, p. 742. Four-fifths of revenue was from tax Sources.

(3) Total deficit, 1914-1924: $1896.7 millions.

While total tax revenue increased from $234 million to $294 million, and all categories of taxes shared in the increase, the heavier yields were due more to rising national income than to upward revision of tax rates. There is even reason to suppose that tax policy in itself had inflationary effects. In 1919, the war profits tax on companies with capital between $25,000 and $50,000 was limited to 25% of profits in excess of 10 per cent, instead of 7 per cent as before. In 1920 no profits under 10 per cent were taxed, and rates were substantially reduced in all brakets. 1/ Enormous profits were made during the postwar boom, yet the yield of the profits tax rose only $11 million in fiscal 1920 and fell in fiscal 1921. Customs duties were reduced. The 5 per cent levy on British goods and the $7\frac{1}{2}$ per cent duty on other commodities were repealed, and tariffs on cement and agricultural implements cut down. 2/

Against these tax reductions must be set the increased surtax rates on personal incomes. However, neither the increase nor the tax was burdensome. A man with income of $10,000, for example, paid $590 instead of $392 income tax. The yield of the tax in 1920 was only $20 millions. It is unlikely that this increase was enough of a barrier to investment or consumption to offset the stimulating effects of the reductions in other tax rates. 3/ Expansionary fiscal policy seems to have been a factor of prime importance in the postwar inflation.

<u>Causes of Inflation: Monetary Policy</u>

While it would be an overstatement to say that there was a clearly formulated monetary policy during the upswing, nevertheless the combined actions of the banks and the Ministry of Finance led to monetary expansion. The bankers' role was a passive one, in accordance with the universal "needs of trade" conception of banking policy. Banks continued to expand credit and note circulation in response to the active demand for credit, and enjoyed a highly profitable year. Many banks paid bonuses in 1919 over and above the customary 12 per cent dividend. Some concern was expressed even then about rising prices, depreciating Canadian dollar, and mounting national debt, but no action was taken to check them until later. Despite Sir John Aird's congratulatory comment the "throughout the war Canadian bankers have abstained, by common consent, from the opening of new branches", 4/ the number of branches of Canadian banks had already risen from 3,225 in November 1914 to 4,442 by November 1919. 5/ It seems unlikely that all this expansion took place in the year following the war. In November 1920 there were 4,856 branches.

Bank loan rates were kept stable during the postwar boom, as during the war, and money seems to have been easy at those rates. Some bankers apparently felt that since they had not raised interest rates, they had not contributed to the inflation:

"There has been no profiteering whatever by the banks of Canada, for the price of money has not been raised. Alone of all commodities, the cost to the borrower of loanable funds of the banking institutions of this country remains unchanged". 6/

1/ Prentice, op. cit. p. 16-17.

2/ These latter reductions may not have been insignificant factors in the construction boom, and the expansion of acreage and employment devoted to field crops.

3/ For a suggestion of the psychological importance of excess profits taxes at this time, see above, <u>Economic thought</u>.

4/ Canada Year Book, 1919, p. 817. The chief deterrents of wartime expansion of the number of branches seem to have been the tax on bank note circulation and the manpower shortage.

5/ Canada Year Book, 1920, p. 61

6/ Sir Frederick Williams-Taylor, General Manager of the Bank of Montreal, in his annual address. <u>Canadian Annual Review</u>, 1919, p. 831.

The role of the banks in the investment market was inflationary on balance up to October 1919, although long-term interest rates were at their lowest in June. After October, bank liquidations of governments exceeded their acquisitions of common stocks, and the Finance Ministry stepped in to maintain the bond market. A Stabilization Committee was set up, and a conference was held in Montreal in March 1920, with the Finance Minister in attendance. At that time, an advance in bond prices was "authorized". Later, reductions were permitted, and control was abandoned altogether in November 1920. Not only the protection of the Canadian bond market, but support of the Canadian dollar on the foreign exchanges was involved in these controls. The ban on sales to discourage "foreign investment", which seems to mean purchase of Canadian securities, was the procedure. 1/ The stabilization seems to have been successful, the Committee placing some $270 million of bonds offered in the market, and it was abandoned only because of public dislike of government controls of any kind. 2/ It was estimated that the Committee saved Victory Bond holders not less than five points in the market. 3/ If so, it is clear that these stabilization measures contributed to the maintenance of the interest structure and added to the inflationary forces operating during the boom.

Causes of Inflation: Inadequate Direct Controls

Shortly after the war -- after one Cost of Living Commissioner was displaced because he "created much distrubance by his investingations and comments regarding high prices". 4/ -- a House of Commons High Cost of Living Committee was set up with investigatory powers. Its findings were that while many prices, and especially food prices, were uncomfortably high, the spreads between basic costs and final prices were reasonably narrow. This attitude annoyed the general public, which blamed high prices on "profiteering" and pointed to the 310 per cent profits in cotton manufacturing, the 40 per cent to 100 per cent markups in retailing, the 74 per cent profits in woollen manufacturing, 61 per cent profits in meat packing, and similar facts disclosed in the Hearings of the Committee. The Committee itself, however, accepted the view of the manufacturers and retailers that profits should be calculated, not on the basis of capital investment, but on the basis of turnover. 5/

The result of the inquiry and recommendations of the Committee was Part II of the Combines and Fair Prices Act of 1919. This Act made it illegal for anyone to "accumulate or withhold from sale any necessity of life beyond what is reasonably required for the use or consumption of his household or for the ordinary purposes of his business".

Anyone holding excess stocks was required to dispose of them at "prices not higher than are reasonable or just". A Board of Commerce was established, empowered to "inquire into, restrain, and prohibit" breaches of the Act, and to recommend prosecution of offenders. Fines up to $100 or imprisonment up to two years were established as penalties, but offenders could also be tried under Part XV of the Criminal Code, which provided fines up to $5,000, imprisonment up to two years, or both.

How dismal was the failure of the Board of Commerce is clearly indicated in the following extract from a contemporary article written by Professor Michell of McMaster University:

> "The history of this unhappy venture is too long to enter into here, we may also say too confused, but in a very short time the

1/ The president of the Royal Securities Corporation, for example, termed the government policy a "violation of the most elementary laws of economies". Canadian Annual Review, 1920, pp. 25-6

2/ In the words of the Finance Minister Drayton, "The stabilization has served a very useful purpose, but it is felt, in view of the fact that the methods of control so general during the war period have been abandoned in so many countries, and generally in Canada, that the control of the sale of Government securities should cease". Canadian Annual Review, 1920, p. 27

3/ By the Canadian Bond Dealers' Association. Canadian Annual Review, 1920, p. 37.

4/ Canadian Annual Review, 1920, p. 333

5/ "Comparative Prices in Canada and the United States", Social and Economic Conditions in Canada, American Academy of Political and Social Science, 1923, pp. 153-4.

endeavour of the Board to stop this rise of prices became farcical in the extreme. With great pomp and ceremony a few grocers caught selling bacon a few cents a pound higher than what the Board considered proper, were prosecuted. Soon dissensions arose among the members of the Board, and they all resigned amid the laughter of the people. For sometime longer it continued as a kind of disembodied ghost with three government officials as members of the Board, and its last act was to decree a fixed price for sugar in order to protect the refiners who had been caught in the disastrous fall in prices of that commodity. This so incensed the public that the Government finally dissolved, while the last act of this tragic-comedy came shortly afterwards when, the Privy Council declared the Board to have been illegally constituted from the beginning. Thus ended Canada's experiment in keeping down the cost of living by government enactments, an experiment not likely ever to be repeated." 1/

Wheat marketing was subject to special regulation during this period. The Board of Grain Supervisors, which had been established by Order in Council in June 1917, was replaced by a new Wheat Board for the marketing of the bumper 1919 crop. The Board had power to buy and sell, to store and transport, to license exports, to sell surpluses abroad, and to fix domestic prices of wheat and profit margins on flour. Its original policy was anounced on July 30th 1919:

1. To buy and market the 1919 crop at a "probable" minimum price of $1.75 (Afterwards fixed at $2.15 with pooling additions.)
2. To make a cash payment to farmers when they sold their wheat.
3. To sell the Canadian crop at prevailing world prices, any surplus after deduction of expenses to be distributed among the original sellers in proportion to grade and quantity.
4. To prohibit speculation on the grain Exchanges or profiteering by handlers, which might be to the disadvantage of producer or consumer.
5. To guarantee immediate cash sale for the farmer, and speedy movement of the crop. 2/

In addition, A Seed Purchasing Commission was organized to assure sufficient supplies of seed for the next years' crop.

The Board seems to have been a success. It received support not only from farmers, but also from people otherwise opposed to the government and to controls in general.3/ Nevertheless, its functions were terminated in August 1920, with the results on wheat prices already noted. So loud was the public clamour for restoration of the Board, that the bill introduced in 1921 by the Progressives could not be ignored. The original Board, however, had been set up under the War Measures Act, on the grounds that emergency was over, that the Dominion government had no powers to compel producers to sell to a Wheat Board, and that the provinces alone could pass legislation dealing with property and civil rights. Consequently, the Wheat Board established in the Act of 1922 was deprived of all powers of compulsion. It will be a matter of some interest and importance to see whether similar constitutional barriers to effective policy are raised when this war is over.

It is worthy of note that during most of the original Wheat Board's life, Canadian wheat prices were lower than the American, despite the depreciation of the Canadian dollar in New York. Effective control during and after War II may require the creation of a similar situation.

1/ "Comparative Prices in Canada and the United States", Social and Economic Conditions in Canada. American Academy of Political and Social Science, 1923, pp. 153-4.

2/ Canadian Annual Review, 1919, p. 330.

3/ Cf. The Canadian Annual Review, 1920, p. 103. The review cited as a case in the point the Honourable George Langley, of Saskatchewan: "The Wheat Board has purchased grain at whatever price it chose to pay and has sold it at its discretion whatever and whenever it pleased. The whole work of the Board, will, in all probability, be covered by the sum of $250,000, and when it is borne in mind that the Board will have handled in the neighbourhood of 125,000 bushels of wheat this will represent a charge of less than a quarter of a cent per bushel".

It is comforting, therefore, to have this precedent in the experience of the last war.

Altogether, direct controls were scarcely more effective in the postwar boom than they had been during the war itself. In face of inflationary demons of even greater ferocity than those which prowled in wartime, they proved hopelessly inadequate. Lack of control must be listed as one of the "causes" of postwar inflation.

Other Causes of Inflation

To some extent, prices rose after the war simply because they had risen during the war. The usual lag between successive stages of the production and marketing process made its appearance, and business men subjected to this "squeeze" tried to escape by raising their own prices whenever possible.. The evidence before the Cost of Living Committee of the House and before the Board of Commerce gives many examples of this progress.1/

In his explanation of the upswing, Dr. W.C. Clark laid considerable emphasis upon inventory speculation, drawing attention to the "way in which, both as a result and a cause of the rapidly mounting price level, there was piling up in the world's markets of an unprecedented volume of products unabsorbed by consumers at the high prices and for the sequestered away by high-bidding operators in quest of still higher prices".2/ There is some statistical support for this point of view. Retail stocks in the United States were 40 per cent to 50 per cent higher in the first half of 1920 than they were in the first half of 1919, and it is reasonable to suppose that the Canadian situation was not markedly different. While there are the usual variations in the records for particular commodities, particularly when seasonal fluctuations are taken into account, cold storage holdings show a significant increase during the period of most violent upswing. Even after seasonal adjustment, the index shows a rise from 79.2 in May 1919 to 126.4 in October, and the average for the last six months of 1919 was higher than for the first six months of the same year for either the first or last six months of 1920. Inventories of most commodities for which records exist either rose or were constant. Algoma Steel's stocks of saleable products rose over sixfold, and their stocks of raw materials and semi-finished products increased from $7 million to $9 million, from the spring of 1919 to the end of the year. Steel of Canada's inventories up from and about $2.5 millions to some $3.7 millions in a similar period. Newsprint in the hand of the Newsprint Association of Canada increased from May to August, 1919. Canadian Westinghouse inventories of electrical apparatus grew slightly in 1919, considerably in 1920. St. Lawrence Sugar Refineries held 30 times as much raw and refined sugar at the end of 1919 as they did at the end of 1918, and twice as much at the end of 1920 as at the end of 1919. Belding-Corticelli doubled their stocks of silk from November 1919 to November 1920. These figures are, however, too scattered to constitute really satisfactory evidence.

An intangible and imponderable factor is "optimism". In the eyes of some business men, investors, and consumers, the recession of 1919 may have been regarded as the expected postwar depression. When nothing very serious happened, these people may have expected prosperity to ensue. There seems little doubt that many people expected a boom based upon exports to an impoverished Europe. 3/

1/ The packers, for example, defended their prices beacuse of previous rises in price of hogs and cattle: "Meats now being sold", a Harris Abattoir representative pointed out "are the product of hogs bought in the past two months during which live hog prices advanced throughout the world to the highest level in history". (Canadian Annual Review 1919, p. 346). Similarly, manufacturers blamed their high prices on high wages, high cost of living, and high materials prices (idim p. 442)

2/ "Business Cycles and the Depression of 1920-1" Bulletin No. 40 of the Department of History and Political and Social Science, Queen's University, Aug. 1921.

3/ Cf. Clark, "Business Cycles," op. cit. pp. 12-16, and H. Michel, "Banking and the Trade Cycle", Journal of the Canadian Bankers Association July 1922, pp. 483.

It is hard to determine just how much importance to attribute to "replacement demand". Consumption in general was not seriously curtailed during the war, and it seems unlikely that there had been serious depletion of consumers' stocks. Production of consumers' goods fell from 74.3 in 1919 to 71.9 in 1920, and while these figures do not preclude a boom in consumers' goods production in the latter half of 1919, they do suggest that no great wave of buying developed. Automobile registrations increased no faster after the war than they did during the war, and the 3,000 increase in employment from 1918 to 1920 could hardly have been a dominant factor in the upswing. Similarly, employment in cotton manufacturing shows a fairly steady rate of growth, and employment in woollen and clothing manufacturing was virtually constant from 1917 to 1920. Employment in boot, shoe, and leather manufacturing did indeed increase, and employment in sugar manufacturing doubled, these isolated cases are scarcely enough to provide an explanation of the inflationary boom that occurred. The one field in which it seems legitimate to speak of a "Backlog" of consumer demand in housing. Construction had fallen to less than one quarter of its prewar level by 1917, and trebled from 1917 to 1920. This factor was unquestionably an important one.

It is equally hard to judge whether the increase in output of producers' goods from 65.1 in 1919 to 75.0 in 1920 represents delayed replacement of plant and equipment or net expansion. Figures for output of such producers' goods as pig iron, coke, steel, tanks and boilers, electrical apparatus, and so forth do not show great postwar expansion, and indeed output of some of these items fell after the Armistice. There seems to have been an opinion current at the time that there was a shortage of shipping due to wartime sinkings.1/ In Canada, however, employment in shipbuilding and repairs fell steadily and quite steeply after March of 1919.

There was clearly a "backlog" in the sense of individual and corporate income spent more slowly than it was earned. The rise in velocity of circulation of bank deposits after the war is sufficient proof of this. However, it seems to have been due more to removal of moral and legal restrant upon spending than to any real need for replacement of goods worn out during the war.

One thing seems clear: the backlog of demand after the last war was insignificant in comparison to the backlog we are now accumulating. Thus production of consumers' goods is still well above the prewar level; but output of durable consumers' goods has been drastically cut, and genuine depletion of consumer stocks of clothing, radios and refrigerators, automobiles and tires, housing, and similar commodities, is taking place. Postponed replacement of peacetime plant and equipment must be incomparably greater this time. Not only is the war effort on a much bigger scale, but its nature involves more direct competition for critical materials with replacement demands of peacetime industries. If a runaway inflation could develop after the last war, how much more critical it could become after this one.

Economic Thought in the Boom

The primary aspects of economic thought during the boom period have already made their appearance above: growing concern over rising prices, with some attention too to the mounting debt and depreciating dollar; general opposition to the continuation of government controls; adherence to the "needs of trade" concept of monetary policy; and a bitter attack by men of the business and financial community upon taxation of profits and incomes. The government provided more and better direction than during the war, but was not sufficiently convinced of the need and efficiency of anti-inflationary measures to withstand public pressure.

1/ Cf. Canadian Annual Review 1920, p. 25 and 1919 p. 828

The Attitude of the government at this time is well expressed in Finance Minister Sir Thomas White's budget message of June 1919. He pointed out that 1919 must be considered a war year from the point of view of government policy, because of the high cost of demobilization and construction.

> "While during the unsettled period following the war governments must do many things outside their function in ordinary times, which private enterprise through lack of resource or from apprehension as to the risk involved is not able or willing to undertake, it must be pointed out that the continuation of such a policy is subject to strict limitation and that we must look forward and prepare for a time when the artificial support of employment and public financing of trade must be greatly reduced or discontinued and the industry and business of the country re-established upon the normal basis of peacetime conditions. The sooner this can be accomplished, the better it will be for the community as a whole". 1/

The public seems to have accepted price inflation as inevitable during the war, but to have been increasingly incensed by the continued rise in cost of living after the war was over.2/ It was this annoyance, indeed, that led to the appointment of the ineffective Board of Commerce.3/ Speaking of "the problem of prices and values, the editors of the Canadian Annual Review report that -

> "this question or condition in 1920 was vital to every financial, industrial and individual interest in the country; its discussion permeated all popular consideration of politics and public affairs in general;"4/

At the same time, however, -- with the exception of the Wheat Board -- the public seems to have opposed continuation of price controls, unless they applied only to the other fellow.5/

1/ House of Commons Debates, June 5th, 1919, Vol. III. p. 3151.
Not that Sir Thomas had any sudden flashes of economic insight. Indeed, in the same speech he displayed once more his confusion of saving with deposit expansion, and his belief that war loans tended to reduce the volume of deposits;
"As evidencing what can be done by Canada in the way of national savings I cannot do better than give the following statistics of deposits.. The Bank deposits in Canada almost doubled in the six year period from 1913 to 1919. In connection with these figures there should also be taken into account the subscription by the Canadian people to the war loans floated in Canada and paid for by withdrawal of their deposits in our chartered banks and other financial institutions".(ibid p.3139)
For evidence that bankers too continued to hold such views, see the annual address of Sir John Aird, General Manager of the Canadian Bank of Commerce, in the Canadian Annual Review, 1920, p. 852.

2/ According to Professor Michell, "the great rise and fall of prices in Canada and elsewhere, has been the postwar preoccupation of all classes. During the war the people were too much occupied with the struggle to notice very much the repidly rising cost of living". "Comparative Prices." (Op. cit. p. 153).

3/ To quote Prof. Michell once more, "The general exasperation caused by the continuance of high prices led to the appointment, manifestly against the better judgment of the Government, of a Board of Commerce armed with plenary powers to prosecute profiteers". (Ibid)

4/ 1920, p. 38

5/ See the comments of the Canadian Annual Review concerning the opposition to the Board of Commerce of the farmers' organization (1919, p. 1336) of the manufacturers (1919 p. 422-3).

Even Prôfessor Clark, now so actively engaged in administering price controls, seems to have doubted the wisdom of instituting them at that time. He argued that scarcity of goods was a more important cause of inflation than monetary expansion, and that price rises were in part a corrective of the conditions which caused them. He emphasized the enormous amount of knowledge necessary for efficient price control, and (quite rightly) pointed out the need to supplement price ceilings with controls of production and labour supply and with rationing. He doubted the willingness and ability of the government to undertake such measures.1/

No stronger statement of the "needs of trade" doctrine of monetary policy prevalent among bankers in the postwar period could be found than is contained in an article on "Canadian Banking" by Sir Edmund Walker, President of the Canadian Bank of Commerce.2/ Some of the more telling extracts follow:

Speaking of the supply of money, "as a matter of fact, it works automatically, and there is always enough and never too much". The banks, he said, "fully realized their obligation to provide the currency necessary for the business of the country.. in his opinion, "little if anything in the financial history of Canada is more creditable than the Finance Act of 1914". Yet a central bank rediscount, because it "may become the most active instrument of inflation":

Business men and financiers generally were opposed to the excess profits and corporate income taxes, and this opposition no doubt had much to do with their reduction and final abandonment. As soon as the war was over, Sir Herbert Holt, President (among other things) of the Royal Bank of Canada, indulged in a little wishful thinking:
"The Business Profits War Tax Act ceased to apply on the 31st day of December 1918, except in the case of any company or person who had failed to make returns. The Minister of Finance has wisely made the provisions of this Act practically conterminous with the period of earning of large profits incidental to special business during the war. If labour is to be given its full opportunity, the capital which finds employment for it must not be hampered".3/ A year later, when it had developed that an Excess Profits Tax was to continue in operation, the Vice-President of the same bank echoed the remarks of his chief:
"To keep production from falling off and to increase it, thus furnishing full employment for labour, is more essential now than ever. There is no encouragement to enlarge old industries and establish new ones when profits, if made, are to be especially taxed by the government".4/

Sir Edmund Walker chose to attack the excess profits tax on the grounds that it would be shifted to the public, and to combine his diatribe against the excess profits tax with a criticism of income taxation as well:

"We are levying heavy surplus profits taxes, and ---- we are really killing the goose that laid the golden egg. When he can do so, he

---

1/ "Should Maximum Prices be fixed?", Queen's Quarterly Vol. XXV. 1917-18. p. 438
2/ Social and Economic Conditions in Canada, 1923. American Academy of Political and Economic Science pp. 141-8
3/ Canadian Annual Review. 1918 p. 800
4/ Ibid, 1919, p. 846.

doubtless passes the tax on to the consumer...and the tax thus becomes a boomerang so far as the public are concerned. The tax is universally admitted to be unscientific and will do incalculable damage if continued...The surtax features of the income tax when carried to the extreme percentages now in effect, are little less unwise and unfair than the Excess Profits Tax".

Sir Edmund also complained about the luxury taxes, preferring a general sales tax turnover.1/

"As for the tax on life insurance companies, it was dismissed in valuable paper" read to the Life Underwriters' Association of Canada: "It is a taxation on thrift, it is unscientific, it is immoral".2/

Some went so far as to oppose even continued borrowing by the government, on the grounds that it competed with private enterprise for capital. Mr. Fielding, a former Minister of Finance, complained about the borrowing operations proposed in the Budget Speech of 1920. Referring to the Victory Loans, he argued:

"It is a very gratifying thing to know that we have this immense sum of money in Canada (:) and I warmly congratulate the Minister of Finance on his success in obtaining it; but...this vast sum of money has been...withdrawn from the ordinary fields of industrial and other activities in Canada...if you take that vast sum away from the people you diminish to that extent their ability to carry on the ordinary business of the country--that is clear enough".3/

Thus we get a picture of a government making a half-hearted attempt to control the situation, yielding to a people who protested more vigorously about anti-inflation measures which inconvenienced them personally than they did about the price rise. "Passing the buck" was the most popular game of the times. Everyone wanted inflation stopped, but everyone felt the inflation was someone else's fault and that policy should be directed only at others.

1/ Quoted in Canadian Annual Review. 1920, pp. 859-60
2/ Ibid, 1920 p. 69
3/ Debates, 1920, May 18th, p. 2498.

V. DEFLATION AND DEPRESSION SPRING 1920--SUMMER 1922.

Since different sectors of the economy reached peak activity at different times, ranging with few exceptions from the beginning of 1920 to the late summer of that year, the timing of the "crisis" is by no means clear cut. A glance at a chart of any one index of economic activity--physical volume of business, industrial production, prices, unemployment--gives the impression of a decisive breakdown and precipitous decline. However, industrial production and physical volume of business were at their maxima in January 1920, while wholesale prices continued to rise and trade union unemployment to fall until June. Consideration of individual time series reveals still wider disparities in behaviour. The first six months of 1920 can be most accurately described as a period of gradual deterioration of the economic situation, while only in the last six months was deflation unmistakable. Remembering the shortcomings of such generalizations, the "downswing" might be delimited as spring 1920 to summer 1921.

The depression which followed was short and mild. Many indices began to show recovery almost immediately after they touched bottom in early 1921--physical volume of business, industrial production, trade union unemployment, for example. Nearly all had turned upwards by the summer of 1922. National income fell only 25%, from $5.4 to $4.0 billions 1/ Most of this drop in income was merely a reflection of lower prices. In terms of 1926 prices, national income was at a peak of $3.83 billion in 1919, shrank to $3.79 billion in 1920 and $3.52 billion in 1921, a total decline of only 8%. In contrast, national income fell by more than 50% from 1929 to 1933, and even at constant prices it fell by %. Moreover, the number of commercial failures in 1922 was less than in 1915, total liabilities involved much the same. Even in the twelve months period with the greatest number of failures (May 1922 to April 1923) there were only 3,576, barely in excess of the 3,316 for 1915.2/ Department store sales fell off very little. However, mail order sales suffered a sharp decline, reflecting greater loss of rural than of urban purchasing power.

Prices

Price deflation was easily the most marked and longlasting feature of the downswing. Wholesale prices fell 40% from July 1920 to December 1921, recovered slightly in the early months of 1922, but sagged to a new low in September. After strengthening by a few points, they then fluctuated within narrow limits until 1927. The annual average (1913 as 100) collapsed from 243.5 in 1920 to 152.0 in 1922, recovered gradually to 160.3 in 1926, settled slowly to 1929, dropped sharply after the crash in that year. Nevertheless, in 1932 wholesale prices were still 4.2% above their prewar level.

Retail prices fell neither so far nor so fast as wholesale prices. From an index (1926 as 100) of 128 in July 1920, they dropped to 98½ two years later. Cost of living, similarly, was reduced only from 165 to 127, and was very stable throughout the rest of the twenties. Much the same is true of wholesale prices of consumers' goods. Foods followed the over-all pattern of prices more closely, toppling from 164.2 in mid-1920 to 94.6 in June 1921, resuming a downward course after a brief respite, and establishing a new low of 85.7 in September 1922. Prices of producers' goods fell faster and further than the average, and the same is true of raw and partly manufactured goods. Prices of fully and chiefly manufactured goods started from a higher level than the

---

1/ D.B.S. figures, quoted in Appendix 4, "National Income" of the Report of the Royal Commission on Dominion/Provincial Relations, p. 11. The figure for 1920 is considerably higher than Deutsch's estimate ($4.4 billions) and the figure for 1921 is higher than the Bank of Nova Scotia's estimate ($3.8 billion). If Deutsch and the Bank of Nova Scotia were both correct, the decline in national income was only 14%.

2/ Figure for 1915 from Clark, "Business Cycles.."op. cit. p. 21. Other figures from D.B.S. "Twelve Years of Economic Statistics," op. cit.

average, but maintained their margin up to 1924.

Farmers had a more unhappy experience. From a pinnacle very close to the average, price of farm products tumbled to depths many points below it, and continued to sag right through 1923. Wheat prices ran a particularly disastrous course, plunging to levels not much more than a third of the 1920 summit. Hides and linseed oil, those star performers of the war-and-postwar inflation, also produced the most spectacular nosedives, with prices in mid-1921 one seventh and one quarter the dizzy heights attained in 1919. Prices of paper sulphite suffered a similarly calamitous collapse. Other commodities provide varying pictures, but there was much more uniformity of price movements in the downswing and depression than there was in the war-and-postwar boom.

Wage rates fell much less than prices, from an index of 198 in 1920 to 182 in 1922. Monthly data for particular occupations tell much the same tale. Whereas wholesale prices with 1914-19 as 100 fell from 178 to 102, steel wage rates declined from about 180 at the end of 1920 to about 120 in mid-1922, machinists at Canadian Westinghouse suffered wage-cuts of only 11%, and so forth. Real wage rates generally rose, and the real wages bill fell very little, during the deflation and depression.

<u>Production and Employment.</u>

While the decline in industrial production from peak to trough was by no means insignificant, from 113.8 in January 1920 to 70.5 in April, 1921, recovery was rapid. By August 1922 the highest level of the war-and-postwar boom had been exceeded. Business activity and physical volume of business followed essentially similar courses. Production of consumers' goods began to shrink a month later, reached its nadir a month earlier, and contracted somewhat less than production as a whole. Production of producers' goods, on the other hand, did not touch bottom until October 1921, and was then proceeding at a rate not much over one third of its boom level. However, in this field too the peak performance of the previous boom was surpassed by the end of 1922.

Employment exhibits similar resilience. The index fell from 91.3 in November 1921 (1926 as 100) to 78.8 in January 1922, but had climbed back to 92.2 by July. While trade union unemployment reached quite high levels, running up to 16.5% in March 1921, it dropped to 7.4% in October and by September of the following year was down to 2.8%. For the last half of the "depression" year 1922, trade uuion unemployment averaged less than for the last half of the "boom" year 1929.

As usual, individual series diverged considerably from the over-all pattern, especially those strongly affected by seasonal factors. Value of construction contracts awarded suffered a setback from April to December of 1920, but established a new postwar high in August 1921. It then fell sharply until the beginning of 1922, climbing to a new pinnacle in June. Value of building permits followed a similar course. Indeed the construction industry can scarcely be said to have undergone a depression at any time from 1918 to 1923. The index of cost of construction fell only from 75.2 in 1920 to 70 in 1921, recovered to 92.4 in 1922, fell to 85 in 1923. Contracts awarded, as would be expected, show a similar development. Building permits actually increased slightly from 1920 to 1921, rose sharply in 1922, and while they receded in 1923 they were still well above the 1920 level. Residential building expanded in every postwar year up to 1923, and in 1922 nearly 2½ times the 1919 level.

Lead and zinc production also followed individual patterns, both fluctuating widely but displaying clear cut upward trends from mid-1920 right up to 1929. Output of flour grew from early 1920 until the beginning of 1923. The automobile industry also had its peculiarities in this period. In terms of employment or number of units produced, it followed the general cyclical pattern, suffering recession in 1921, recovering in 1922 and reaching new heights in 1923. Value of production, however, reached a peak in 1920 which was not regained until the late twenties. The reason seems to have been reduction in costs, especially of materials, which followed value of output, while wages and salaries followed

employment in their fluctuarions.[1]

Foreign Trade

Shrinking exports were the dominant factor in the downswing. From December 1919 to April 1921, value of exports was cut in three, from $138 million to $44 million. Even the physical volume of exports was cut almost in half, and compared to April of 1919--curiously, the high point for physical volume in the whole 1913-23 period and the low point for value during the 1919 recession--was down by nearly 65%. Imports fell nearly as much in value, from $142 million in March 1919 to $48 million in April 1922, but not much more than a third in volume, from an index of 124 (September 1920) to 80 (June 1922). Trade was unfavourable from March to October 1920, and from February to October 1921. Exports for fiscal 1922 as a whole were only $754 million, compared to $1,287 million in fiscal 1920; the export surplus of $222 million in fiscal 1920 became an import surplus of $30 million in fiscal 1921, and in 1922 the active balance was only $6 million.

Sharply reduced exports to the United Kingdom were mainly responsible for the disappearance of the export surplus. Import surpluses from the United States actually diminished in these years, and prices of exports and imports moved more or less in harmony, the former falling 63% and the latter 60% from 1920 to 1922. Individual commodities of course had their own idiosyncrosies. Zinc exports, for example, were at their low in mid-1920 and developed strongly in mid-1922, just the reverse of the general cycle. Wheat exports fluctuated violently, but the trend was gently rising from mid-1920 to the end of 1921, steeply climbing thereafter. Bacon exports, on the contrary, never regained their 1919 levels at any time in the next four years. Nickel and asbestos exports suffered particularly precipitous declines. On balance, however, it is clear that the contraction of exports were of prime importance in the downswing and the brief depression that followed.

Finance

The total supply of money, including currency in the hands of the public and total deposits with the chartered banks, contracted by less than 20% from its maximum in November 1920 to its minimum in August 1922. The average for 1920 was $2.7 billions, for 1922 $2.3 billions, a drop of less than 15%. Notice deposits declined relatively little, from $1,323 million in October 1919 to $1,156 million in October 1922, a 13% shrinkage. Demand deposits were reduced by 34%, from $729 million in November 1919 to $475 million in August 1922, and active note circulation fell by 30%.

Once again, therefore, movements in the supply of money do not themselves provide a complete explanation of price movements. Supply of goods probably diminished somewhat in the period, inventory decumulation hardly counterbalancing contraction of current output. Thus purchasing power must have fallen more than prices. Since quantity of money fell less than prices, the velocity of circulation must have declined considerably. The data are scanty, but lend support to this conclusion. From the autumn of 1920 to early 1923, bank clearings for various centres show contractions ranging from 40% in Halifax and 30% in Montreal to 20% in Winnipeg and 12% in Toronto, even when corrected for seasonal fluctuations.

Restriction of current loans was the primary factor in monetary deflation. From $1,405 million in October 1920, these were cut down to $1,102 million in August 1922. Call loans underwent a bigger percentage reduction, but were a much smaller factor in absolute terms, falling from $132 million in January 1920 to $97 million in July 1922. Except for bills of exchange, which were very sharply reduced during 1921 and early 1922, the biggest percentage decline in assets was in investments, which dwindled from $671 million in October 1919 to $310 million

1/ The figures of residential construction and automobile production are from the Financial Post Survey, 1926

two years later. Throughout the latter part of 1920, all of 1921, and early 1922, the banks increased their holdings of governments while liquidating other types of security. By April 1922, their holdings of non-government securities had been cut to less than half their December 1920 high. This policy probably reflected banking co-operation with the Finance Minister in supporting the bond market at this time. Real estate holdings were cut down during 1920, but started to grow again in 1921. Thus the banks added to the decline of the stock market and real estate market. Long-term interest rates hardened throughout 1920, adding to the deflationary forces in operation at that time, and fell from the beginning of 1921 until late in 1922, when it was too late to prevent a deflation. Common stock prices moved inversely with bond prices, weakening throughout 1920 and setting lows in the summer of 1921. Preferred stocks followed a similar course. While various types of shares established heights at different times, all major categories touched bottom in the summer of 1921 except textiles, which began to recover in April.

Causes of Deflation: Fiscal Policy

Fiscal policy in 1919-20 and 1920-21 was well calculated to bring about deflation. Tax collections swelled from $294 million in fiscal 1920 to $369 million in fiscal 1921. In fiscal 1922, a depression year, tax collections were still $320 million. Total revenues were $350 million in fiscal 1920, $436 million in fiscal 1921, $382 million in fiscal 1922. Expenditures were cut from $786 million in fiscal 1920 to $528 million in fiscal 1921, and $463 million in fiscal 1922. Accordingly, the deficit was narrowed from $436 million in fiscal 1920 to $192 million in fiscal 1921 and $27 million in fiscal 1922.

"Leverage effects" of government spending may even have been at their maximum in fiscal 1919. Total disbursements were higher in 1920, but outlays on war, public works, and railways were higher in 1919. However, the "leverage effects" of these reductions would not be fully felt during fiscal 1920, and they may have been partially offset by the higher subsidies to railways in that year.

In any case, all items likely to have strong "relation" effects (secondary increases in private investment) were drastically reduced in fiscal 1921:

Table 14. Selected Government Expenditures, 1920-1922
(in millions)

Fiscal Year	War & Demobiliz'n	Railways & Canals	Public Works	Rly. Subsidies	Total Capital Expenditures.
1920	$347	$38.2	$48	$335	$69
1921	17	22.4	38	---	40
1922	1.5	13.1	21	---	16

Source: Canada Year Book, 1924, pp. 739, 40

"Consolidated fund" and "capital expenditures" under these headings combined. Outlays for pensions and re-establishment also fell markedly, from $89 million in 1920 to $70 million in 1921 and $53 million in 1922.

The changed composition of tax revenue, as well as the increase in total collections probably had depressing effects. The slight fall in customs and excise revenue was more than offset by increased collections under the new sales tax. Similarly, the rise in income tax collections would counterbalance any stimulating effects of the declining yield of the business profits tax after 1920. While taxes collected from banks, trust companies and insurance companies, were small part of the total revenue, they nevertheless increased enough in 1921 to add somewhat to the deflationary forces.

While the downward revision of the tariffs in 1919 may have

had some influence upon customs collections in subsequent years, the modest decline in revenues from customs and excises in fiscal 1921 and the much steeper fall in the following year were more closely associated with falling imports and purchases. The increased revenue from sales taxes was, however, due to measures introduced at this time. "Luxury taxes" on certain imports were doubled in the 1920 budget, making some of them very high indeed, and rates of other "luxuries" such as liquor, beer, etc. were also raised. More important, a sales tax of 2% on the turnover of manufacturers was introduced.1/ The "luxury" taxes, with minor exceptions, were abolished in December 1920, but by that time deflation was well under way.

As already noted, the coverage of the excess profits tax was restricted in 1919 and the rates reduced in 1920. The income tax was raised by 5% on all incomes above $5,000 in 1920. Payment during 1921 of this higher rate on the relatively large incomes earned in the previous year must certainly have operated as a limiting factor on both consumption and investment. The previous boom having been based partly upon actual or expected increases in consumption, a tax policy which penalized consumption would have serious repercussions. The tax policy of 1920-22 must have acted in this manner on balance. A general sales tax tends to raise prices and so to restrict demand. The effects upon investment would be neutral at best, lower profits taxes counterbalancing higher income taxes. In the depression as in the boom, fiscal policy actually adopted was a far cry from what was necessary to maintain stability.

Borrowing operations were not a significant factor at this time. From the end of fiscal 1921 to the end of the following fiscal year, a period roughly synchronizing with the downswing, funded debt in New York and London was reduced a few millions and domestic debt was increased a few million, leaving the total substantially unchanged. In November 1922, a renewal loan of $114.5 million was floated in Canada, and a loan of $100 million was renewed with New York banks; but operations on such a small scale would not alter the general effects of fiscal policy in its taxing and spending aspects.

Causes of Deflation: Monetary Policy

While most bankers clung to their passive concept of banking operations, monetary policy became distinctly deflationary after the beginning of 1920. Unfortunately, there seems to be no record of action actually taken by the banks to raise loan rates or to tighten credit at prevailing rates. Their activities in the security market were obviously contractionist. The figures show a reduction of both current and call loans, but figures alone cannot tell us whether the credit contraction was the result of bank policy or merely the result of a diminished demand for loan funds.

However, there is ample evidence that by 1920 bankers were convinced that prices had to be forced down, partly in order to reduce cost of living and partly to stop the depreciation of the Canadian dollar. Some bankers finally realized that the desired deflation would require monetary contraction, although the emphasis seems to have been on restricting currency circulation rather than volume of deposits. Sir Edmund Walker, for example, in his annual address as President of the Canadian Bank of Commerce in January 1920, spoke as follows:

> "The imperious demands of war rapidly raised all prices, and payment was only possible by inflating the currency; unfortunately inflated currency sustains and further increases prices...We cannot adjust prices without also bringing about a contraction of the volume of paper money and other instruments of credit, and so far as it is possible to enforce contraction without interfering with the production of what is really necessary, the reduction of prices

1/ The original proposal was for a 1% tax, but the rate was later doubled.

will be facilitated. In a word, bankers should not aid speculation, or assist ventures which do not directly lead to porduction". 1/

Preoccupation with the foreign exchange rates, which was a characteristic of banking thought at the time, is suggested by the following extract from the 1920 annual address of the President of the Home Bank;

"The standing of exchange is, however, a matter which must still be viewed with some concern, as it is having an effect upon our foreign trade." 2/

A year later, when prices had already fallen considerably, the emphasis on need for deflation was qualified by admonishments not to let deflation proceed too far:

"The outcry for deflation, which at one time was insistent in some quarters, has largely died out. Bankers feel that too rapid deflation, accompanied by an abrupt fall in prices, is not a good remedy for existing evils. We want a decline in prices, but it should be an orderly one."3/

From countless such statements, it seems safe to deduce that banking policy was partly responsible for the downswing. Some indication that money had been tight is provided by the following statement of the General Manager of the Merchants' Bank made early in 1921:

"There are indications that the monetary position, broadly speaking, is less stringent, and that the general liquidity of credit now in evidence is continuing to develop further." 4/

The editors of the Canadian Annual Review for 1920 provide additional evidence of tight money in the fall of that year:

"With the coming of September, the contraction of money for crop moving purposes and other reasons, impressed itself upon industries and a distinct readjustment of conditions became apparent..; by November, liquidation was well under way,." 5/

A similar statement was made by the General Manager of the Canadian Bank of Commerce in January 1921:

"Now that markets are becoming more normal and prices are falling, the demand (for credit) is sure to lessen. We may therefore expect easier money conditions and a lower level of profits until business becomes more active".6/

We have already seen that government borrowing operations in this period were negligible. Monthly issues of Dominion notes fell considerably during 1921 and 1922, partly no doubt in response to loss of gold from the Treasury. Total circulation of Dominion notes dwindled from $312 million in 1920 to $214 million in 1922. Circulation of subsidiary coinage also contracted. Thus the monetary policy of the Department of Finance as well as of the banks was deflationary in complexion.

1/ Canadian Annual Review 1919 pp. 820-822.
2/ Ibid p. 892.
3/ Sir H. Vincent Meredith, President of the Bank of Montreal, annual address. Ibid 1920, p. 866.
4/ Canadian Annual Review 1920, p. 866.
5/ Ibid p. 33
6/ Ibid p. 851. So also in the 1921 edition: "The organized effectiveness of banking action in a national sense was obvious; the warnings and policy as to undue inflation were on record; the contraction of loans and cautious management of 1921 were well known and understood." (p. 33).

Other Causes of Deflation: Anticipations

Disappointment of unduly optimistic expectations, particularly with regard to export markets, seems to have played some role in the deflation of 1920-21. Professor Michell even gives this factor first place among causes of the downswing:

> "In a word, it was caused by a miscalculation on the part of the commercial world of the buying capacity of Europe after the war. This may perhaps appear a hard saying, but I am convinced that it is the only tenable explanation to put forward. The war was over, Europe was at peace, and her stock had run down to vanishing point and must be replenished. Surely here was an opportunity unparalleled to do business with all the world a buyer. But the world was not able to buy what it so earnestly desired, especially with prices leaping upward. The exhaustion of Europe was extreme, the destruction of wealth, of purchasing power, had been enormous and the inevitable result followed." 1/

This explanation is also epoused by Dr. Clark. The "apparently insatiable European demand" created a fictitious prosperity to which collapse was the inevitable sequence. This demand "encouraged the spirit of speculation which still further raised prices by creating artificial shortages and by raising exaggerated hopes of future price increases." 2/

The hue and cry about "profiteering" and the prosecutions of the Board of Commerce, pusilanimous as they were, may have helped to reverse expectations as to price movements. Once there was widespread agreement that prices must and would come down, the collapse of prices followed as a matter of course. By the end of 1920 there was enough talk a about "inevitability" of deflation to make it truly inevitable. According to the Canadian Annual Review for 1920,

> "During the year bankers were consistent in public and private in warning the people that a change was impending and then, in part, as to its character." 3/

The editors quote a statement made by the President of the Bank of Montreal on December 6th, which can be regarded as more or less typical of such warnings: "Following a period of the excessive prices and inflated currencies characteristic of war times, the country is now in the midst of the process of re-adjustment. It has been difficult to make producers, merchants, and others carrying heavy stocks, who have grown accustomed to high prices, accept the inevitable by recognizing the fact that it is futile to attempt to overcome natural laws and to realize that economic conditions, which no artificial means can alter, alone are the cause of price decline. A lower price level must be reached before we can reasonably look for a resumption of business activity on a sound basis." 4/

In face of the prosecution of "profiteers" and repeated forecasts of price collapse by financial leaders, it was natural that inventory decumulation should eventually set in. The available figures are inadequate, but support the contention that such unloading of commodity stocks was a factor of some importance in the downswing. The index of cold storage holdings dropped from 125.3 in 1920 to 117.2 in 1921 and 93.2 in 1922. All components of the index shared in the decline, and some items, such as beef and cheese, were unloaded very quickly indeed. Inventories of the St. Lawrence Sugar Co. shrank from some 70 million pounds at the close of 1920 to less than 20 million a year later, and under 6 million at the end of 1923. Silk inventories of Belding Corticelli were cut by about one third, Westinghouse

1/ H. Michell, address to Bankers' Educational Association, Journal of the Canadian Bankers Association, July 1922, pp. 483-4
2/ W.C. Clark, "Business Cycles". op. cit. p. 14.
3/ Canadian Annual Review, 1920 p. 53.
4/ Ibid. p. 34.

inventories were cut almost in half, from the end of 1920 to the end of 1921 or 1922. Newsprint stocks went up in early 1921, but dropped precipitously in the latter half of that year and in early 1922. While steel inventories fluctuated widely, the trend was clearly downward from the end of 1920 to the end of 1922. There were exceptions, as in the case of Lake of the Woods flour inventories and Dominion Textiles holdings of finished goods, but in general inventories seem to have been liquidated on a significant scale at this time. 1/

Labour unrest may also have made a contribution to the undermining of optimistic expectations. Trade union membership and time lost in industrial disputes were at their height in 1919, but the nervousness about the growing strength of trade unions and the accompanying communist scare did not die easily. On some occasions the unrest reached the point of violence, such as the clash between strikers and police in Winnipeg in June 1919. This riot, which was associated with the "One Big Union" movement and led to the arrest of J.S. Woodsworth, later founder of the C.C.F., was attributed by the press to Austrian incitation and leadership! 2/ There was throughout the whole period a quite irrational fear of foreign "isms", which were linked with "the labour problem" both at home and abroad. It was even suggested in some quarters that the hatred of the Western farmers for the banks might lead them to epouse the socialist cause. 3/

Altogether, it seems safe to say that unfounded optimistic expectations had a part in the boom, and equally unfounded fears of collapse helped bring about deflation.

Economic Thought and the Deflation

The basic tenets of economic thought in the downswing period have emerged clearly enough in the foregoing discussion of its causes: the "inevitability" of depression and the necessity for a reduction in prices. Desire to lower the cost of living, fear of mounting national debt, worry over the depreciation of the Canadian dollar, and a simple conviction that "what goes up must come down", all contributed to the wide spread agreement on this score. Other matters of interest discernible in the literature of the period are the conflict between the Finance Ministry and various elements of the business and financial community over tax policy, and the much higher level of understanding of the fiscal process by Finance Minister Sir Henry Drayton than was displayed by his predecessor.

Drayton's proposals for higher taxation were based not only on a feeling that the national debt should be cut down, but also upon a clear understanding of the deflationary effects of increased tax rates. War justifies large deficits, he argued; but now,

> "These conditions today are changed; the war is won; expenses are great; the cost of Government operations as well as the carrying on of every business of every character in the country, has increased enormously, and over and above this the country, with other countries which took their part in the titanic struggle, is faced with a pyramid of debt....If anything like the same effort (as during the war) is made to overcome debts, and by overcoming debts to bring about a proper deflation of prices, credits, and circulation, the task will prove well within our powers...".

1/ See the statement of Sir Vincent Meredith on inventory speculation, on inventory speculation, quoted in the Canadian Annual Review 1921, p. 23.

2/ Cf. Canadian Annual Review 1919 p. 475.

3/ Cf. Ibid 1920, pp. 21, 66-7. Among the factors making for optimism at the end of 1921, the Canadian Annual Review for that year mentions that "The attitude of Labour was proving most satisfactory in Canada, with, at the close of the year, an absolute minimum of trouble; everywhere..the Bolshevistic spirit of 1919 was clearly losing its grip and unrest almost visibly subsiding."

In supporting his proposal for higher luxury taxes, he added:

> "Not only is more revenue necessary, but extravagant and luxurious expenditure ought to be checked. Just so long as expenditures on non-essentials and extravagant expenditure continues, just so much longer will the drop in the value of essentials be postponed."

At the same time, however, he justified reduced taxes on profits,

> "To an extent sufficient for the purpose of enabling firms to set aside more of their profits to reserves or plant extensions and to[1] put their business in a better position to meet the deflation period."

A year later, when depression already lay upon the land, Sir Henry had a few revisions to suggest. He yielded to the antagonism to luxury taxes, arguing that they had already served their purpose: deflation had come. The excess profits tax was dropped, because "with present business conditions it would in any event become largely imperative" but also because "it is a tax which works harm to the general financial situation and business conditions in an ordinary period and more particularly in a period of business depression."[2]

Sir Henry encountered opposition in one quarter or another to every proposal for higher taxes. We have already noted instances of attacks on the luxury taxes and excess profits taxes. Sir John Williamson, speaking to the bankers, bewailed the "excessive and unjust" income taxes, lumping them together with "governmental meddling in business", which, he argued, "produces only confusion and mischief"; but he supported the sales tax, on the grounds that it "bears equitably upon all elements of the population".[3] On the other hand, the Retail Association felt that the income tax should be strengthened, expressing "surprise and regret beyond measure" that it yielded only

---

1/ The quotations are all from the Budget Speech of May 1920, reprinted in House of Commons Debates, Vol. III pp. 2488 ff.

2/ Budget Speech; May 1921; House of Commons Debates, Vol IV pp. 3114 ff.

3/ Journal of the Canadian Bankers' Association, Vol. 28, 1920-21, p. 320. A clear analysis of the attitude of Canadian business interests towards the sales tax introduced in 1920, is furnished by H.R. Kemp, M.A. of the University of Toronto, who also brings out the question of the regressive nature of the tax: "The sales tax has been favourably received in Canada (so far as any new tax can be said to be welcome), and it seems to be regarded, at least by the business community, as the most promising instrument for abolishing the national deficit. Unlike the customs duties, it does not offend the free trader; its ease of collection, its dependability, its elasticity, render it satisfactory from the administrative point of view; and it receives further influential support from the belief that it is entirely shifted to consumers, does not constitute a fresh burden upon 'business', and does not check the accumulation of capital. In public discussions, not much has been heard with regard to its final incidence, its justice, or its probable remote effects." Social and Economic Conditions in Canada, American Academy of Political and Social Science, May 1923, p. 217.

The Canadian Annual Review for 1921 mentions a joint Conference in Toronto on March 31st. of that year, called by the Finance Minister and including representatives of the Retail Merchants' Association, the Credit Men's Trust Association, the wholesale Grocers' Association and the Canadian Manufacturers' Association to discuss the tax situation. A resolution was passed declaring that the Business Profits Tax should not be re-enacted, that the Income War Tax on corporations should be repealed, that the Excise tax on manufacturing confectionery should be abolished, and that the Sales Tax should be readjusted, presumably to be collected from the importer or manufacturer instead of from the retailer.(p. 32. Cf. also ibid 1920 p. 53)

$20 million, and bitterly opposed the sales tax, describing it as "an ill-advised, poorly conceived, and poorly devised measure that will be resented by every sound-thinking commercial man in Canada."1/ Even the policy of abandoning the excess profits tax was not without its critics. The Toronto Globe of January 1st, 1920 reminded the government and the people.

> "Taxation of profits is a settled policy in almost every country in the world today. Moreover, the levy upon incomes..has reached a point in Britain and other lands that would make many Canadians squirm if applied here. But there is no evidence that it is preventing investments in business and industrial organizations."

To these conflicting views, Sir Henry firmly replied that "We want to get the money, and we are going to get it", but asked for detailed suggestions.2/

Sir Henry's superior sophistication in monetary matters is well illustrated by the following statements:

> "Inflation of credit has more to do with increased buying power and therefore, with that increased buying power, has more to do with affecting the cost of commodities than circulation. It is true that in part these credits are increased by an inflated circulation, but the circulation deposited in banks from time to time plays but a small part of the total deposits. Every credit transaction, every advance made by a bank to a customer inevitably produces a corresponding deposit in the banks of that customers' creditor or creditors. The net result is to increase bank deposits by the extent of the credit and to increase the liabilities of the bank granting the credit without any corresponding increase in its cash assets.....Inflation can only safely be cured in this as in other countries, by the Government and Provincial Governments stopping further loans and by all governmental institutions, including municipalities and indeed every individual whose circumstances permit it, reducing expenditure whenever possible and by an increased production in all our forms of productive industry."3/

The need for deflation was the dominant thought in all economic and financial discussion. The Canadian Annual Review proclaimed in 1920:

> "To those who understood the bases of international finance and economics, it was clear that another change was pending, though how soon it would come could not yet be clearly discerned; in English-speaking countries the Banks would have much to say in hastening a period of deflation and compelling the lowering of prices upon which the existing situation so largely turned."4/

The editors seem even to have resented resistance to deflation by retailers:

> "There was, up to September, no such sweeping change as in the United States, there were various increases and some spectacular declines, as in sugar and potatoes, but price cutting was not general and retail merchants—who still carried large stocks at high prices—did not reduce them very readily; they certainly made the process of deflation much slower."5/

The manufacturers, apparently, were less hard to convince:

> "The change in wages and prices had to come, and this was fully realized by manufacturers, but it was not till after the middle of the year that the time of change seemed near."6/

1/ Canadian Annual Review 1920, p. 53.
2/ Ibid p. 53.
3/ Budget Speech, May 1920, loc. cit. pp. 2480-81.
4/ p. 17.
5/ p. 43.
6/ p. 144.

The bankers began looking for recession the moment the war was over:

> "We have now entered upon a period such as has been looked for ever since the war ended--one of lessened activity in business and falling prices--" and "A lower price level must be reached before we can reasonably look for a resumption of business activity on a sound basis."1/

In this case, the business and financial community found itself in agreement with the professional economist. In his analysis of the 1920-21 depression, Dr. Clark speaks on the "expected reaction" and stresses the point that "everybody knew the world would have to pay the usual price for the hectic prosperity which had no solid basis."2/

Thus Canada--and the world--got in 1920-21 what it wanted. To no inconsiderable extent, the depression of 1920-21 came about because the government, the financiers, and even the business men felt that a depression was inevitable and took steps to bring it about.

In fairness to this viewpoint, it must be admitted that once the war and postwar inflation had taken place, stabilization at the top would have been difficult. There is no analytical reason why a price rise could not be levelled off at some point, but an inflation left to its own devices tends to become cumulative, and to stop it without a crisis is no simple task. Knut Wicksell, founder of the distinguished Swedish school of economists, was unquestionably right in his contention that nothing is of less importance than the level of prices; but as he also pointed out, violent price movements can result in distortion of the price-income structure which require adjustment if the economy is to function smoothly. After an inflation as severe as Canada experienced from 1913 to 1920, it may very well be easier to force down prices and incomes that are too high while keeping others constant, than to bring up those that have lagged behind. Since the postwar boom started when there was virtually no unemployment, it is even conceivable that something approaching a "Hayekian" distortion of the investment structure took place, and the fact that output of producers' goods rose from 65.1 in 1919 to 75.0 in 1920 while output of consumers' goods fell from 74.3 to 71.9 might be regarded as evidence of such distortion.

On the other hand, there is no proof that stabilization at the top would have been less troublesome. In any case, there is no reason why reduction of certain prices should be permitted to give rise to unemployment. If deflation is necessary, it could be accomplished by a stiffening of excess profits taxes in a manner which still provides an incentive for expansion and efficiency, increased taxation on goods in scarce supply, and direct limitations on consumer spending, at the same time that income is prevented from dropping too far by a public works or social security program or both.3/

1/ The first statement is from the annual address of the General Manager of the Canadian Bank of Commerce in January 1921. Canadian Annual Review 1920 p. 851. The second is from the annual address of the President of the Bank of Montreal for the same year, ibid p. 864.

2/ "Business Cycles.." op. cit. p.2 "Reconstruction" and "deflation" seem to have been used almost as synonyms. Thus the Canadian Annual Review fo r 1921 says that "deflation in the Dominion, as in the United States, had nearly reached its level, and there were indications that the worst stages of reconstruction in North America had been passed," (17) and speaks of "the heavy fall in prices which accompanied reconstruction." (19)

3/ These matters are dealt with more fully in the author's paper on "Postwar Tax Policy", to be published in the Canadian Journal of Economics and Political Science, August and November 1943.

Above all, there is no excuse fof letting deflation become cumulative. Deflation that goes too far may leave the price-income structure more badly distorted than it was at the peak of the boom. Indeed, such seems to be the case of either the 1920-22 or the 1929-32 deflations.

Fortunately, Canada need not face this problem after the present war. If her war finance continues to combat inflation as successfully for the duration as it has thus far, there will be no need to even consider ways and means of bringing about a controlled deflation. No deflation will be necessary. Certain prices may have to come down, other to come up; but the general level can quite safely stay where it is.

Despite its anachronistic character, however, the "inevitability" bogey may rear its head again, like some prehistoric monster that has outlived its time. Virtually all economists, and a growing number of bankers, business men, and voters, understand that neither a high national debt, a high price level, nor a depreciated currency constitutes an unassailable argument for deflation. Nevertheless, there remains a substantial residue of opinion that still adheres to the "what-goes-up-must-come down" dogma. Apart from winning the war, it is hard to think of anything more crucial for the future welfare of our country than the elimination of this residue. Certain situations unquestionably require deflationary policy, others just as certainly require inflationary action, if the level of national income and employment are to be kept safely at the optimum. The volume and distribution of government obligations, the quantity and distribution of money, foreign exchange rates, the level and structure of prices, the size and distribution of national income, the extent of excess capacity and unemployment--all these are data of great significance for the determination of appropriate economic policy at each point of time. None of them provides an infallible criterion in itself.1/

The one thing that seems certain is that depressions are unnecessary. No one has shown in a manner carrying conviction that depression was "inevitable" after 1919, or after 1929. There is even less reason to suppose that depression is "inevitable" after 1919, or after 1929. There is even less reason to suppose that depression is "inevitable" after this war, since much of the machinery needed to prevent it is already in operation. The avoidance of depression, however, requires a carefully designed and publicly accepted policy to prevent it; a defeatist outlook in the government or among the people as a whole, and especially policy designed to bring depression about as a sort of atonement for past sins, could certainly bring depression upon the land. Moreover, the prevention of postwar depression starts with the present moment. On the one hand, it requires continuation and perhaps even strengthening of anti-inflation controls, not only until the war is over, but until industry is converted to peacetime production. On the other, it requires the preparation of an adequate reserve of useful public work and completion of plans for social security, In order to prevent a drop in income which might become cumulative.

1/ For an interesting statement of the principles of fiscal policy, see A.P. Lerner, "Functional Finance", and the Federal Debt <u>Social Research</u> February 1943.

VI THE WAR AND THE STRUCTURE OF THE CANADIAN ECONOMY

In comparison with great waves of prosperity and depression such as from 1894 to 1914 and from 1924 to 1934, the recession of 1920-21 was a ripple on the stream of Canadian economic development. Recovery set in so soon after the downswing began, production and employment fell so little from one year to the next, commercial failures were so limited, that the period is more accurately described as "deflation" than as "depression". However, we saw in our introductory section that the typical postwar pattern is: hesitation; short inflationary boom; sharp but short deflationary depression: sustained prosperity; collapse and stagnation. Perhaps, then, the true "postwar depression" was the period 1929 - 1939, rather than the period 1920-21. Might not the whole period of the twenties and thirties be regarded as a delayed and painful readjustment to the distortion brought about by the war-and-postwar boom of 1915-20?

The answer seems to be "no". The extent of distortion of the Canadian economic structure during the war and its immediate aftermath was too slight to provide a full or satisfactory explanation of the unhappy experience of the thirties. Indeed, the only serious maladjustment left by the war was excess acreage under field crops, and it was an excess largely because of self-sufficiency programs abroad which narrowed the export market. These self-sufficiency programs were, of course, partly the result of the war; but an unexpected change in demand for a major product is not what is usually implied by "wartime distortion" of the Canadian economy.

Let us first examine the price structure. The main categories of prices for various years are shown in Table 15. Glancing down the 1920 column, it is obvious that the war-and-postwar inflation led to "distortion" in the sense of an unbalanced rise in prices. Whether the disproportionate price rises represent true "distortion" in the sense of disequilibrium, or reactions to changes in costs or taste that required alteration of the price structure for the maintenance of equilibrium, is impossible to determine beyond question. For the sake of argument, let us grant that the differences in price rise involved a significant degree of maladjustment.

Look now at the 1922 situation. All prices have fallen, some more than others. The relative positions of producers' goods and consumers' goods, of foods, beverages and tobacco, vegetable products, and the general wholesale level, of "raw and partly" and "fully and chiefly" manufactured goods, are reversed. But is there clearly less "distortion" than in 1920? Can we say definitely that the downswing was a period of price adjustment? While there are items that suggest realignment, the spreads were enhanced between raw materials and partly manufactured goods and fully and chiefly manufactured goods; between the general wholesale level and foods, beverages and tobacco or wood and paper; and between cost of living and wage rates.

Perhaps "readjustment" cannot be accomplished so quickly. Let us consider the situation in 1929. The relation of the price of raw materials and partly manufactured goods to fully and chiefly manufactured goods has again reversed itself, but the discrepancy is bigger than ever. The margin between producers' and consumers' goods has also increased. Export and import prices are farther apart than they were in depression. Foods and related commodities are above instead of below the average, but the gap has widened. Wage rates are still farther above the cost of living. There is little indication of "readjustment" here.

Table 15. Price Movements, 1918-1937

(1913 = 100)

INDEX	1918	1920	1922	1929	1932	1937
Wholesale price average	199.0	243.5	152.0	149.3	104.2	132.1
Producers' goods	196.1	242.7	146.8	142.6	93.7	127.9
Consumers' goods	172.9	226.3	153.6	152.7	114.9	128.3
Foods, beverages, & tobacco	192.5	244.0	146.0	161.9	99.6	131.5
Raw & partly manufactured goods	189.3	241.6	148.5	152.8	86.2	132.1
Fully & chiefly manufactured goods	197.0	241.5	155.0	143.5	107.7	124.2
Exports (a)	195.1	244.4	146.4	142.5	84.9	125.3
Exports (a)	185.6	217.5	137.5	129.0	96.6	123.0
Vegetable products	220.2	287.6	148.4	157.7	94.4	152.2
Animals & products	179.4	204.8	135.4	153.8	84.2	110.6
Fibres, textiles, & products	269.9	303.3	174.7	156.9	119.7	125.1
Wood & paper products	139.4	241.6	166.4	147.0	108.1	120.0
Iron and its products	227.3	244.4	151.8	136.0	125.2	147.7
Non-ferrous metals	144.2	137.7	98.9	100.8	59.9	85.1
Non-metallic minerals	144.9	197.5	188.4	163.6	150.6	152.5
Chemicals & their products	187.3	223.3	166.4	150.5	132.4	128.4
Cost of living (a)	148.4	188.8	152.2	152.7	124.2	127.0
Wage rates	147.0 1/	197.8	182.4	192.7		

Sources: D.B.S., Prices and Price Indexes, 1913-1940, pages 9, 35, 41, 51, 58.
D.B.S., Economic Statistics of Canada, 1919-1930, Page 26.

(a) Transferred to 1913 base.
1/ This figure is taken from an article by J.J. Deutsch "War Finance and the Canadian Economy, 1914-20". _Canadian Journal of Economics and Political Science_, November 1940. The figure is not representative of rates of pay received by all wage-earners, since it is heavily weighted by wage-rates in skilled trades.

Still, the boom may have retarded readjustment, which may have come about only in the downswing after 1929. Let us look, then, at 1932. Producers' and consumers' goods prices by this time have changed places once more, but with a still wider gap between them. The same is true of raw materials and partly manufactured goods and fully and chiefly manufactured goods. Foods are now below instead of above the average, wood and paper products are now above instead of below. Chemicals and iron and steel products are more out of line than in any of the previous years, and the same is true in percentage terms of non-ferrous metals and products.

If we carry our analysis on to the next peak year, 1937, while the discrepancies are certainly less glaring than in 1920, they are still substantial relative to the lower average level of prices. There is still no clear-cut evidence of "readjustment" to wartime distortion. Our conclusion, then, is that in the realms of prices, while a process of gradual, irregular, and frequently interrupted narrowing of price margins can be discerned in the 1920-37 period, price movements are too diverse to consider readjustment to wartime disruption of the price structure a dominant causal factor.

Turning to occupational distribution, despite complications due to changing definitions of occupational categories, the same conclusion emerges with sufficient clarity to lend conviction. There was very little distortion due to war, and very little readjustment afterwards. The decennial census figures for 1911, 1921 and 1931 are presented in Table 16. The striking facts illustrated by this Table are two: 1/ There was more change in the second decade than in the first, and 2/ The change was in the same direction in both decades in every case except trade and transportation, where the fluctuations could be as well due to cyclical as to war factors, and where in any case the changes are too small to be significant. What we see is certain trends operating throughout the whole period--the decline in the "three f's", (farming, fishing and forestry), the gradual decline of the relative importance of manufacturing, the increasing importance of services, and smaller number of male employees and larger number of female employees relative to total population. The relative loss of construction employment from 1921 to 1931 might be attributable in part to postponement of construction during the war, consequent building boom in the twenties, and consequent depression in the construction industry in the thirties; but there is nothing that can be labelled definitely as readjustment to wartime disturbances.

If we examine the annual data of Table 16, we do find some minor shifts of occupational distribution after the war. While the total number of agricultural employees rose throughout the whole period from 1911 to 1922, there is nevertheless some evidence of a "back to the farm" movement in the 1921-2 depression, after which the share of agriculture in total employment resumed its downward course. Manufacturing suffered a decline in both absolute and relative terms, and while the total number of manufacturing employees rose again in 1923, manufacturing did not regain its 1920 share of total employment. Other factors show remarkable stability, with the share of the construction industry increasing during the depression years. Figures of national income produced tell essentially the same story. Surely, there is no acceptable proof of the "readjustment" thesis here.

In agriculture, and especially in field crops, the war unquestionably left an inheritance of maladjustment, which might be called "distortion". Production of field crops, dairy products, and farm animals were the most profitable agricultural pursuits during the war, and suffered the most intense depression afterwards. In 1920 field crops provided some three quarters of agricultural revenues, dairy products about 13% and farm animals about 7%. Area under field crops rose from 33 million acres in 1914 to 60 million acres in 1921, with wheat responsible for about two thirds of total acreage. Wheat acreage increased from 10.3 million acres in 1914 to 17.4 million in 1918, but continued to rise after the war as farmers tried unsuccessfully to combat price collapse with higher output. 1/

1/ For an excellent explanation of why agricultural output tends to increase in the early stages of depression, see Galbraith and Black, "The Maintenance of Agricultural Production During Depression", Journal of Political Economy, June 1938. This phenomenon is by no means peculiar to Canada nor to the twentieth century. Cf. Higgins, "Agricultural and War", Op. cit.

Table 16. Percentage distribution of gainfully occupied population, 1911, 1921, & 1931.

Group	1911	1921	1931
Males, gainfully occupied	79.5%	77.5%	76.6%
Females, gainfully occupied (p.c. of total population)	14.3	15.3	17.0
Agriculture	34.3	32.8	28.7
Fishing, Hunting & Forestry	2.9	2.2	2.5
Mining	2.3	1.6	1.8
Building	9.0	9.0	6.5
Manufacturing	18.1	17.5	16.1
Transportation	8.0	8.4	7.8
Trade and Merchandising	10.4	11.8	9.9
Services	15.0	16.6	19.5

Sources: 1921 and 1931 Censuses(embodying some estimates).

As Table XIII shows, the biggest expansion of all took place from 1920 to 1921. Acreage was again increased in the late twenties, and in 1931-32.

The increase of wheat acreage during the last war has proved a serious problem in face of a contraction of exports from an average of $261.2 million in 1915-17 to $141.4 million in 1937-39. It might be said that it has proved a problem whenever the price of wheat dropped below $1.00. Yet Canada's chronic agricultural difficulties can hardly be called "readjustment to wartime distortion." There has been little readjustment, and acreage tends to go up when prices are high and for a short while after prices drop, regardless of the cause of price movements.

A good case can be made out for regarding the thirties rather than the early twenties as the true period of post-war depression. It seems quite likely that the chief problem of economic policy after this war will be to prevent a similar collapse when the expected postwar boom has petered out, five, ten, or more years after the "reconstruction period" proper is over. It is quite a different thing to say that the depression of the thirties was "caused by" the war of 1914-18. The question will bear further study; but we find no satisfactory evidence that such was the case.

In War II, acreage under field crops has remained relatively constant, wheat acreage has even fallen a little. The number of men in the armed forces is much the same on a per capita basis as in War I. The expansion of debt and money supply is of the same order of magnitude. However, in this war 50%, and not 20%1/ of national income is generated by war expenditures. Industrial production has expanded 150%, not 10%. We have developed a heavy industry, power plants, aircraft, munitions, automotive equipment, and other factories, shipbuilding capacity, on an astounding scale for a country of 12 million people. Our present economic structure is dependent upon a large export market for manufactured goods—a market composed of countries that used to export manufactured goods to us. Relative to prewar organization, the "distortion" of our economy is incomparably greater this time. If difficulties as serious as those suffered from 1919 to 1939 could follow the last war, what disasters could follow this one if policy is equally ill-conceived.

1/ Including British expenditures in Canada. Canadian expenditures were only 10%.

Table 17. Gainfully Occupied Compared on a full-time Basis 1919 - 1923

(Numbers in Thousands)

Industry	1919 No.	1919 %	1920 No.	1920 %	1921 No.	1921 %	1922 No.	1922 %	1923 No.	1923 %
Agricultural	956.8	30.5	973.3	29.7	1,017.5	33.1	1,022.8	32.7	1,016.2	31.8
Forestry	124.3	3.9	136.4	4.2	117.5	3.8	118.3	3.8	128.8	4.0
Trapping	14.4	.5	12.5	.4	10.6	.3	18.4	.6	17.6	.6
Fisheries	42.2	1.3	36.5	1.1	33.7	1.1	35.9	1.1	33.9	1.1
Mining	60.0	1.9	63.7	1.9	63.8	2.1	65.5	2.1	70.8	2.2
Manufacturing (n.e.s.)	492.8	15.7	531.9	16.2	396.0	12.9	404.3	12.9	436.6	13.7
Electric Power	9.6	.3	10.7	.3	10.7	.3	10.7	.3	11.1	.3
Construction	104.2	3.3	138.5	4.2	127.9	4.2	149.9	4.8	143.7	4.5
Transportation	257.0	8.2	272.5	8.3	249.5	8.1	253.8	8.1	260.2	8.2
Communication	26.9	.9	27.5	.8	26.4	.9	26.6	.8	28.0	.9
Trade	364.9	11.6	380.2	11.6	362.3	11.8	352.9	11.3	359.8	11.3
Finance	67.6	2.2	70.8	2.2	69.4	2.3	68.8	2.2	69.6	2.2
Service	574.8	18.3	583.1	17.8	549.7	17.9	556.7	17.8	568.0	17.8
TOTAL	3,137.2		3,279.6		3,078.6		3,131.1		3,192.1	

Source: Supplied by courtesy of Mr. S.B. Smith, Chief, Business Statistics Branch, Dominion Bureau of Statistics.

VII THE 1913-23 CYCLE AND "OUTSIDE INFLUENCES"

If Canadian economic development from 1913 to 1923 or later cannot be regarded as a process of wartime distortion and postwar readjustment of the internal economic structure, was it instead, as was then and is still widely supposed, largely a matter of reaction to "outside influences?1/

The accompanying chart provides a comparison of national income, total exports, export surplus, and net long-term capital movements for the 1919-23 period. It is immediately apparent that national income tends to vary directly both with exports and export surplus. In percentage terms, the fluctuations in income are less violent than the variations in exports, and exports in turn fluctuate less violently than the balance of trade. Exports as a proportion of national income move irregularly, rising from less than 17% in 1914 to nearly 50% in 1917, dropping below 30% in 1920 and to 21% in 1921. The export surplus increased from a debit balance -4 per cent in 1914 to 17 per cent in 1919, but fell to a debit of -8 per cent again in 1920. In 1918 and 1919, both exports and the export surplus fell below the 1917 level, but national income continued to rise. In 1920, the export surplus was negative, while income was at its peak. The movements of long-term capital vary still less closely with income.

Neither statistical correlation nor the lack of it tells us anything final about causal relationships. The correlation of income with exports may mean that changes in income cause changes in exports, or that both are determined by a common third factor, as well as that changes in exports cause changes in income. The disparity of movement in 1918-20 suggests that other factors than exports or balance of trade are of considerable importance in income determination.

However, there is a large and respectable body of doctrine which shows that foreign trade may have a strong influence on national income. According to the principle of the "foreign trade multiplier", national income will, in the absence of offsetting factors, vary by some multiple of variations in the balance of trade.2/ Statistical surveys suggest "multipliers" ranging from two to four for countries largely dependent upon foreign trade, such as Australia and Canada. D.C. Macgregor estimates that the "foreign trade multiplier" for Canada is between 2 and 4.5.3/ Since Prof. Macgregor includes in his estimate secondary effects on income through induced investment, it perhaps should be called a "foreign trade leverage coefficient" rather than a foreign trade multiplier coefficient, as the multiplier in its pure form refers only to secondary increases in consumer spending. However, it is the total effect of variations in foreign trade that interests us, so we need not quibble over definitions.

If we estimate the "foreign trade leverage coefficient" at 3, the change in export surplus from 1914 to 1919 would account for over half of the rise in national income in that period, and all of the drop in income from 1919 to 1921. The rise in income in 1915 to 1917 would be overexplained, and the rise in income in 1918 and 1920 would be unexplained unless we admit a lag between change in export surplus and change in income over a year. If we can believe Professor Plumptre, such an assumption would be illegitimate, and the great bulk of "leverage" effects would be felt in the same income period, which he takes to be a crop-year, as that in which the change in balance of trade occurs.4/ Thus "foreign trade leverage" would be an important element in any explanation of the 1914-23 cycle, but is not a complete explanation in itself.

1/ See above, Chapter II.

2/ Some writers prefer to regard total exports as the "multiplicand", and to treat imports as a "leakage" reducing the size of the multiplier. A case could be made out for regarding the monetary multiplicand as the balance of payments rather than the balance of trade. However, such matters need not detain us here.

3/ Monthly Reveiw of the Bank of Nova Scotia, December 1935.

4/ A.F.W. Plumptre, "The Distribution of Outlay and the 'Multiplier' in the British Dominions", Canadian Journal of Economics and Political Science, August 1939.

However, as has been clearly shown by Mr. Bryce, the balance of trade is not the only kind of "outside influence" on Canadian economic fluctuations.1/ Prior to 1914, and again in 1921-23, the most important outside influence was foreign investment in Canada. Investment, whether financed domestically or abroad, has its own "leverage effects". It is true that both domestic and foreign investment are effected by the balance of trade, both directly and through the effect of trade upon national income. Such effects of foreign trade upon investment have already been included in the "foreign trade leverage coefficient", and in any case investment clearly depends upon other things besides the balance of trade.

The ease of shifting from Canadian to American or British securities in normal times makes the Canadian stock and bond markets highly susceptible to fluctuations in London and New York. The very close relationship of Canadian business and financial thought and public opinion generally to the state of mind in Britain and more especially in the United States means that economic outlook in Canada is inevitably affected by currents of economic thought and anticipations in those countries. As Mr. Bryce puts it, "It is very difficult for us to avoid feeling optimistic when they do, and depressed when they feel depressed".2/

An important deduction which Mr. Bryce makes from this close relationship of Canadian investment upon economic conditions in the United States is that with the approach of that country to economic maturity, "if Canadian opportunities are to be realized, investment in this country may have to become more independent of American conditions and sentiment than heretofore."3/

There can be no doubt that Canadian economic conditions are profoundly affected by outside forces. Yet there can be no doubt whatsoever that the final determinants of Canadian national income are consumption expenditure and investment expenditure, however prompted. From this simple fact, it follows that the close relationship between Canadian and foreign economic fluctuations in the past is no excuse for adopting a "defeatist" attitude towards Canadian economic developments in the future, merely because there is a possibility that things may not go well elsewhere. It is true that the United States is threatened with serious inflation. Is inflation in Canada inevitable under such conditions? The answer is no. Canadian prices depend upon the flow of purchasing power relative to the flow of goods and services in Canada; these things are subject to internal control. Britain or the United States or both might have a depression sooner or later after the war. Does that mean that depression is inevitable in Canada? Again the answer is "no". It means only that steps must be taken to generate more income internally, by public works or other means. The substitution of public spending for an export surplus as a course of income may result in some slight loss of efficiency in allocation of resources, but the loss would be insignificant compared to the losses through cumulative unemployment. The policies necessary to insulate the Canadian economy against foreign inflation or depression may be complicated and drastic, but they can be formulated and carried through.

Moreover, there is evidence that "outside influences" are less important in this war than they were in the last one. Total exports have never reached 25% of national income, and the export surplus has never approached 10% of national income, during the war. Moreover, the great bulk of our exports are financed directly by the government as part of war expenditures and are thus a form of government spending. Government expenditure is responsible for half of the national income. Care must be taken not to reduce it faster or slower than private spending can increase. If we succeed in this task, we need not worry too much about "outside influences."

1/ R.B. Bryce, "The Effects on Canada of Industrial Fluctuations in the United States", Canadian Journal of Economics and Political Science, August, 1939.
2/ Op. cit. p. 384.
3/ Op. cit. p. 385.

VIII. SUMMARY AND CONCLUSIONS

While more time to ponder the results of this inquiry into Canadian economic history from 1913 to 1923 must elapse before final conclusions could be offered, certain facts stand out clearly enough and others may be perceived, in the foregoing description and analysis.

Summary: A Model War-and-Postwar Cycle

Canadian experience from 1913 to 1923, supplemented by experience to date in this war, provides additional evidence that war-and-postwar economic developments have a characteristic sequence. There are five discernible stages:

(1) In its initial stages, financing a war requires monetary expansion, and even some degree of price rise, to stimulate rapid absorption of excess capacity and unemployment and whatever reallocation of labour and resources is required by the war effort.

(2) After the initial inflation, only an integrated anti-inflation policy combining heavy taxation, judicious borrowing, and direct controls of wages and prices, can prevent or immobilize further increases in the money supply and so avoid a cumulative price rise.

(3) With or without serious wartime inflation, war finance results in the accumulation of money and bonds in the hands of individuals, business concerns, and institutions, many of which are not accustomed to holding such large reserves of liquid assets.

(4) At war's end, the government is unwilling or unable to reduce immediately the rate at which it generates income through public expenditure. For a while, uncertainty as to future events checks the tendency for persons and institutions to convert their liquid holdings into goods and services by purchases on the market. Rapid demobilization prevents an immediate rise in income, although reabsorption of men released from the armed forces into civilian occupations seems to take place very quickly indeed.

(5) Once this period of hesitation is over, private spending increases. Added to government spending already high, and opposed by no immediate increase in the supplies of producers' and consumers' goods, the result is accelerated inflation.

In some countries, such as Germany, the inflation was permitted or even assisted to become cumulative, breaking down only when the circulating medium became virtually useless. In other countries, including Canada, the common conviction that a deflationary recession was the only alternative to runaway inflation brought deflationary recession about. No country seems even to have tried to check postwar inflation and replace it with stability--with the possible exception of Switzerland. However, the success in Canada and Great Britain in replacing inflation with essential stability in the present war shows that it can be done. The postwar problem is not basically different so far as control of prices is concerned.

There is no inherent necessity in the sequence of war-and-postwar events here outlined. It is due in large measure to people's ideas of what should or must be, and the influence of these ideas on economic events both directly and through their effect upon economic policy.

Role of Economic Thought

Considerable space has been devoted to a demonstration of the close relationship between economic policy and economic thought in government, financial, and business circles, and to a lesser extent among agricultural and labour groups and the public generally. It has also been shown that economic policy has had a profound influence upon economic conditions. It has even been suggested that a country gets by way of economic developments what it thinks it should have or must tolerate. In Canada, because of the

large role that has been played by foreign trade and capital imports at various stages of our history, the "inevitability" doctrine has a particularly strong hold.

It follows that if we are to maintain our acrobatic economy safely on its thin wire of stability after the war, public opinion must be first shaped so as to understand the nature of the postwar problem and the policies most likely to solve it. Second, public opinion must be welded together. In the past, leadership in economic thought has come from the business and financial communities and from members of the government. Today, the professional economist plays some role, and agricultural and labour opinion also makes itself felt. Tobegin with, therefore, an integration of economic thought among these various groups is necessary. Experience during and after the last war suggests that leadership in economic thought comes best from economists, which is not altogether remarkable. Nevertheless, integration of economic thought is a two-way process, requiring education of economists as well as by economists.

Role of Economic Policy

Of all branches of economic policy, fiscal policy was most influential in the 1913-23 cycle. Moreover, the explanation of the contrasting experience of the two war periods lies very largely in the fiscal policy field. Monetary policy has been very largely the handmaiden of fiscal policy, and the same is true of direct controls of wages and prices--or the lack of them.

The primary characteristic of the 1913-20 upswing was inflation due to monetary expansion. Monetary expansion in turn was due to growing public expenditures and deficits, associated first with war and later with inability or unwillingness to stop war spending even though fighting had ceased, with increased outlays on public works, and to a much lesser extent with costs of demobilization, re-establishment, and pensions. At no time in this period was a truly effective effort made to immobilize new money by taxation or direct controls and even the largescale public borrowings were not of an unadulterated deflationary character.

The banks assisted the Department of Finance in its deflationary financing, largely at the latter's instigation, but certainly with no strong opposition from the former. The banks bought Treasury bills, subscribed to war loans, and made loans to customers for the purchase of war bonds, as well as financing agriculture, industry, and commerce.

Similarly, the downswing was due largely to deflationary fiscal policy, with the banks again playing a supplementary role. In addition to direct effects through reduced government expenditures, increased taxation, credit contraction, and bank liquidation of securities, government officials and bankers helped to precipitate depression by assuring the public that depression was inevitable.

Role of Replacement Demand

The "backlog" of demand for worn-out or depleted consumers' and producers' goods does not seem to have been a significant factor in the 1919-20 boom, and accordingly exhaustion of replacement demand cannot be regarded as an important factor in the subsequent recession. Only in the construction field can any real accumulation of postponed demand be discerned. However, the construction industry thrived throughout the whole of the twenties, and the 1920-22 recession cannot be explained in terms of the building cycle.

Since restrictions upon consumption and upon replacement of peacetime plant and equipment have been much more stringent in this war, replacement demand may be much more important when it is over. Added to other inflationary forces, it may make the task of controlling inflation more difficult than ever. Moreover, whether activation of idle money and conversion of bonds into cash to be spent is due to "replacement demand" or to brand-new demand is after all a matter of secondary importance. If demand increases before supply can be increased to meet it, a price rise is the only possible result. Postwar policy must continue to prevent demand from increasing out of proportion to supplies available at current prices.

Role of "Outside Influences"

Canadian economic fluctuations are partly, but by no means entirely, due to outside forces. Both "foreign trade leverage effects" and foreign investment in Canada have exerted enormous influence upon Canada's economy in the past. They may do so again in the future. Yet there is evidence that since 1923, "outside forces" have been gradually replaced by domestic investment, public and private, as the chief factor in Canadian income generation. From 1920 to 1929, capital invested in Canada increased by 38%. The export surplus was negative in both 1920 and 1929, but at its peak in 1925, the export surplus was well below the 1917 figure. Total exports reached a peak of $1,364 million in 1928, compared to $1,555 million in 1917. Net investment in the twenties was considerably more than total export surplus for these years.1/ In the thirties, domestic investment, and particularly public investment, still further replaced exports as an income-generator. Since war began, public expenditures have become the dominant factor in the economy, accounting for 50 per cent of the national income. The export surplus in 1942 was slightly above the 1917 figure, but since it was paid for by the Canadian government, it is more properly regarded as public spending than as an export surplus. Moreover, Canada has become a net creditor nation.

If necessary, foreign trade and foreign investment in Canada can be still further replaced by domestic investment, public or private. Such replacement is in no way incompatible, with full employment, nor is it incompatible with a very high level of national income on prewar standards. Even if it were necessary to "give away" goods on the present scale, or to spend equivalent amounts on public works, a national income on the current level is perfectly possible. It should be possible to do better than that, given anything short of the worst possible luck or quite inadequate economic policy.

Role of Wartime "Distortion" and Readjustment".

Exigencies of war as such were not of primary importance in postwar business cycles. Except for the inflation and deflation already noted, no great disruption of the economy took place during the war, and there is little evidence of readjustment afterwards. The construction industry boomed the more as a result of wartime limitations. The expanded monetary base made possible considerable industrial expansion in the later twenties without lowering prices, and so helped to sustain the boom. Yet the boom of the twenties seems to have been due to factors which appeared in the twenties, and the depression in the thirties seems to have been due mainly to forces which were present before the last war.

In many respects, the relation of war finance to the boom of the twenties and the subsequent collapse is of much greater importance than its relation to developments in 1919-23. No doubt the postwar inflation brought severe hardship to some individuals and groups, and the 1920-22 recession must have had unpleasant consequences for many people. Yet if the worst we had to fear was a repetition of 1919-23, our current concern over postwar reconstruction would be excessively grave. Nothing very terrible seems to have happened between 1919 and 1923. The sufferings consequent upon the inflation and deflation would be well worth avoiding, but would not warrant viewing the postwar world with alarm.

Of course, the 1919-23 cycle multiplied by 2½ in accordance with the difference in proportion of national income generated by war expenditure would be very serious indeed. Moreover, if an inflation 2½ times as steep or a depression 2½ times as deep were to occur, it is highly probable that neither would stop there. Either inflation or deflation would tend to become cumulative, with great danger that our high-wire-walking economy would perish either in the inflationary flames or in the depression abyss. We must certainly be prepared to prevent either catastrophe from befalling our economic system in the two or three years following the war.

Nevertheless, it is the period starting 5 to 15 years after the Armistice when the post-postwar boom is over that will bring the gravest dangers. In order to meet them, it is of the utmost importance that the nature and causes of post-postwar booms and the post-postwar depressions that follow should be thoroughly understood in their relationship to the Canadian economy. Such understanding would require a study at least as careful and perhaps several times as long as the present one. In the final section, an attempt is made to trace the relationship of the war to the

1/ Figures for net investment are from the Report of the Royal Commission on Dominion-Provincial Relations, Vol. I, page 116.

whole Canadian economic development from 1919 to 1939, but it is necessarily more speculative than the other parts of this concluding chapter.

The Nature of Canadian Economic Fluctuations Since 1913

In 1913, Canada reached the end of a "long wave" upswing associated with rapid population growth, discovery of new resources, opening up of new territories, and supplementary industrial and commercial activities. Despite brief interruptions of this expansion prior to 1913, it would not be too much to say that this upswing began with the discoveries of Jean Cabot or Jacques Cartier and the first settlement of the country. Since 1913, however, Canadian economic history consists of a perpetual struggle against "secular stagnation."

True, when War I began there was still room for a great deal of expansion, There were still unoccupied territories to settle, still new mineral resources to exploit, still new industries to develop, still room for a bigger population. However, it was becoming clear that maintenance of the same rate of growth was impossible; and a mere slackening of the rate of growth is enough to cause economic difficulties. The best land was taken up, most of the easily accessible mineral deposits were discovered, the railways were built, the west was opened up, the towns and cities were there, The population growth in the first decade of this century was 33%; due to reduced immigration and falling birth rates, population grew only 18% in the twenties and only 10% in the thirties. Only in the last two years of the twenties, and never since, has value of building permits and value of construction contracts awarded reached 1912 levels. Between 1890 and 1915 the value of capital invested in manufacturing quadrupled, as it had between 1870 and 1890. Between 1920 and 1940 it increased only 40%. Between 1900 and 1915 the net value of manufactured products increased 52%, between 1920 and 1937 it declined. Despite expansion in certain areas and industries, it is clear that in 1913 the Canadian economy was beginning to slow down.

Moreover, those countries upon which Canada counted most for stimulation from outside, Great Britain and the United States, had proceeded even farther into the stage of economic maturity. It is partly for this reason, both directly and through trade restrictions imposed by those countries to offset the factors of stagnation operating there, that Canada never regained export surpluses of the magnitude of the last war until this war broke out -- and this time Canada has had to finance most of her own exports.

The first world war provided temporary escape from the stagnation process. By postponing construction, it provided one of the chief bases of continued activity after the war. By increasing the area under field crops, it added ultimately to the problem of overexpansion in this sector of the economy. In the middle twenties, when wheat prices were over $1.00 per bushel and foreign self-sufficiency programs had not made themselves felt, there was again an illusion of prosperity in the west which led to still further expansion. The result was that the collapse of prices and intensification of European self-sufficiency drives (in part a product of the last war) during the thirties was disastrous for the Canadian west.

During 1919-22, inflation and deflation took place without disturbing the basic pattern of the Canadian economic situation. "Stagnation" might well have reared its ugly head again in 1923, had not a constellation of more or less accidental factors made its appearance. Chief among these factors were four: (a) the automobile, with all the investment it brought with it in factories, roads, petroleum refineries, and so forth; (b) hydroelectric power, which called forth investment not only in power plants, wires, and so on, but also in mining and pulp and paper, especially in British Columbia, Ontario, and Quebec; (c) prosperity abroad which led to renewed expansion of Canadian foreign trade; (d) reduced freight rates from the middle west to Vancouver, which, in conjunction with the opening of the Panama canal, stimulated expansion in Alberta and western Saskatchewan. In the Maritimes, the stresses and strains of economic

maturity were apparent even in the twenties, but for the economy as a whole they were offset by the youthful vigour of British Columbia, and the middle-aged robustness of Ontario and Quebec.

"Secular stagnation" reappeared with a vengeance in the thirties. While some recovery had been achieved by 1939, it was far from complete, as the subsequent doubling of national income and 150% growth of industrial production demonstrates. Moreover, what recovery there was cannot be considered endogenous or spontaneous. In part, it was due to recovery in the United Kingdom, a recovery which was in large measure "spontaneous" in its initial stages, but after 1934 very largely induced by government expenditures on armaments and public works. In part it was due to recovery in the United States, which in turn was brought about mainly by government spending, depreciation of the dollar, and other measures of intervention. To a limited extent, Canadian recovery was due to domestic recovery policy, including public work expenditures.

Only with the outbreak of a new world war and the consequent huge growth of government spending were the forces of "stagnation" fully overcome. Once again war has provided an interlude of expansion. It is quite likely that the interlude will last for some time after this war, as it did after the last one. Sooner or later, however, "stagnation" will appear again, stronger than ever. "Accidents" of the sort which brought prosperity in the twenties will no doubt occur again from time to time; but with each period of expansion, further expansion through private enterprise becomes more difficult.

The policy implications of this thesis have been made popular by Hansen, Keynes, and others. Too little attention has been paid, however, to their relevance to the Canadian economy. It is true that "stagnation" is less advanced here than in England or in the United States; but if the thesis is applicable at all, its import is immeasurable. Without detracting from the desirability of retaining anti-inflation techniques and preparing for possible unemployment in the immediate postwar period, the validity of the "secular stagnation" thesis for Canada means that our main attention should be directed towards erecting bulwarks against repetition of the conditions of the thirties.

The author recommends, therefore, that this thesis be carefully studied in its deeper relationships to the Canadian economy. Such a study will involve among other things consideration of regional differences, which have unfortunately had to be glossed over in the present pages. It clearly implies, however, that much more significance must be attached to programmes of public investment, the conservation and development of Canadian natural resources, the reorganization of our transportation and communication facilities, housing and town planning, and the like - as long-term matters, not merely as stop-gaps for a temporary or transitional postwar adjustment period.

Government
Publications

Government
Publications